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Haiti Urban Sector Survey

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Latin America and the Caribbean

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This report is based on findings
of an urban sector mission
which visited Haiti in November 1977.
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and included World Bank staff members
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IBRD 13652
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TABLE 3A
HAITI - SOCIAL INDICATORS DATA SHEET

	HAITI			REFERENCE GROUPS (ADJUSTED AVERAGES)		
				- MOST RECENT ESTIMATE		
	1960	1970	MOST RECENT	SAME GEOGRAPHIC REGION	SAME INCOME GROUP	NEXT HIGHER INCOME GROUP
	/b	/b	ESTIMATE /b	/c	/d	/e
LAND AREA (THOUSAND SQ. KM.)						
TOTAL	27.8					
AGRICULTURAL	14.7					
GNP PER CAPITA (US\$)	110.0	130.0	230.0	1066.7	182.9	432.3
ENERGY CONSUMPTION PER CAPITA (KILOGRAMS OF COAL EQUIVALENT)	36.0	34.0	30.0	911.1	88.9	251.7
POPULATION AND VITAL STATISTICS						
TOTAL POPULATION, MID-YEAR (MILLIONS)	3.6	4.2	4.7	.	.	.
URBAN POPULATION (PERCENT OF TOTAL)	15.0	18.7	23.1	57.9	15.0	24.2
POPULATION DENSITY						
PER SQ. KM.	131.0	153.0	168.0	25.6	46.8	42.7
PER SQ. KM. AGRICULTURAL LAND	303.0	306.0	319.0	77.6	254.1	95.0
POPULATION AGE STRUCTURE (PERCENT)						
0-14 YRS.	42.0	41.5	41.3	42.0	43.6	44.9
15-64 YRS.	54.9	54.0	54.7	52.2	53.3	52.8
65 YRS. AND ABOVE	3.1	4.5	4.0	3.7	2.9	3.0
POPULATION GROWTH RATE (PERCENT)						
TOTAL	1.6	1.6	1.6 /f	2.7	2.4	2.7
URBAN	2.6	3.8	4.0	4.3	4.0	8.8
CRUDE BIRTH RATE (PER THOUSAND)	39.9	37.6	35.8 /g	35.8	44.3	42.2
CRUDE DEATH RATE (PER THOUSAND)	21.8	17.8	16.3 /g	9.1	19.7	12.4
GROSS REPRODUCTION RATE	..	3.0	2.5	2.6	2.9	3.2
FAMILY PLANNING						
ACCEPTORS, ANNUAL (THOUSANDS)	..	..	..	.	.	.
USERS (PERCENT OF MARRIED WOMEN)	..	..	..	15.1	14.6	14.2
FOOD AND NUTRITION						
INDEX OF FOOD PRODUCTION PER CAPITA (1970=100)	102.0	100.0	102.9	102.1	96.4	104.3
PER CAPITA SUPPLY OF CALORIES (PERCENT OF REQUIREMENTS)	..	..	..	103.9	92.3	99.5
PROTEINS (GRAMS PER DAY)	..	..	..	60.3	50.0	56.8
OF WHICH ANIMAL AND PULSE	..	..	..	26.7	13.9	17.5
CHILD (AGES 1-4) MORTALITY RATE	27.0	33.0	..	8.7	..	7.5
HEALTH						
LIFE EXPECTANCY AT BIRTH (YEARS)	43.2	47.7	50.0 /g	62.6	45.8	53.3
INFANT MORTALITY RATE (PER THOUSAND)	200.0	..	149.1	56.9	102.7	82.5
ACCESS TO SAFE WATER (PERCENT OF POPULATION)						
TOTAL	..	..	12.0	60.7	26.4	31.1
URBAN	..	..	46.0	78.0	63.5	68.5
RURAL	..	..	3.0	34.9	14.1	18.2
ACCESS TO EXCRETA DISPOSAL (PERCENT OF POPULATION)						
TOTAL	..	..	..	61.1	16.1	37.5
URBAN	..	..	..	80.3	65.9	69.5
RURAL	..	..	..	25.4	3.4	25.4
POPULATION PER PHYSICIAN	10600.0	11730.0	8510.0	1899.3	13432.7	9359.2
POPULATION PER NURSING PERSON	10310.0	7460.0	5550.0	1220.1	6983.3	2762.5
POPULATION PER HOSPITAL BED						
TOTAL	1790.0	1370.0	1450.0 /h	422.3	1157.6	786.5
URBAN	..	..	290.0 /h	258.2	183.3	278.4
RURAL	..	..	5270.0 /h	2281.6	1348.8	1358.4
ADMISSIONS PER HOSPITAL BED	..	..	..	25.6	19.5	19.2
HOUSING						
AVERAGE SIZE OF HOUSEHOLD						
TOTAL	..	4.6	..	5.2	5.2	..
URBAN	..	4.8	..	..	4.8	..
RURAL	..	4.5	..	..	5.3	..
AVERAGE NUMBER OF PERSONS PER ROOM						
TOTAL	..	2.1	..	2.0	..	..
URBAN	..	2.2	..	2.1	1.8	2.3
RURAL	..	2.1	..	2.7	..	..
ACCESS TO ELECTRICITY (PERCENT OF DWELLINGS)						
TOTAL	..	..	2.9	51.2	25.9	28.3
URBAN	..	..	..	77.3	..	..
RURAL	..	..	..	12.8	..	10.3

TABLE 3A
HAITI - SOCIAL INDICATORS DATA SHEET

	HAITI			REFERENCE GROUPS (ADJUSTED AVERAGES)		
				- MOST RECENT ESTIMATE) /a		
	1960 /b	1970 /b	ESTIMATE /b	SAME GEOGRAPHIC REGION /c	SAME INCOME GROUP /d	NEXT HIGHER INCOME GROUP /e
EDUCATION						
ADJUSTED ENROLLMENT RATIO:						
PRIMARY: TOTAL	46.0	50.0	70.0	103.5	62.9	75.8
FEMALE	42.0	43.0	..	102.9	45.9	67.9
SECONDARY: TOTAL	4.0	6.0	8.0	37.2	14.4	17.7
FEMALE	2.0	4.0	..	37.9	8.8	12.9
VOCATIONAL (PERCENT OF SECONDARY)	21.0	19.0	8.0	14.7	6.6	7.4
PUPIL-TEACHER RATIO						
PRIMARY	43.0	45.0	..	32.8	38.5	34.3
SECONDARY	13.0	18.0	..	17.8	19.8	23.5
ADULT LITERACY RATE (PERCENT)	10.0	20.0	..	74.9	36.7	63.7
CONSUMPTION						
PASSENGER CARS PER THOUSAND POPULATION	2.0	3.0	3.2	26.9	3.1	7.2
RADIO RECEIVERS PER THOUSAND POPULATION	5.0	17.0	20.0	173.5	31.1	71.1
TV RECEIVERS PER THOUSAND POPULATION	0.5	2.0	2.9	69.4	2.8	14.1
NEWSPAPER ("DAILY GENERAL INTEREST") CIRCULATION PER THOUSAND POPULATION	11.0	19.0	21.0	72.8	6.0	16.3
CINEMA ANNUAL ATTENDANCE PER CAPITA	..	..	..	4.3	1.4	1.6
EMPLOYMENT						
TOTAL LABOR FORCE (THOUSANDS)	2100.0	2150.0	2357.0	.	.	.
FEMALE (PERCENT)	47.4	47.4	47.2	21.4	24.2	28.0
AGRICULTURE (PERCENT)	83.0	73.7	..	37.8	60.7	54.1
INDUSTRY (PERCENT)	6.4	7.2	..	..	..	..
PARTICIPATION RATE (PERCENT)						
TOTAL	55.8	50.6	50.5	30.8	39.8	37.8
MALE	59.7	55.2	55.1	47.2	53.3	50.3
FEMALE	52.1	46.4	46.2	13.2	19.6	20.9
ECONOMIC DEPENDENCY RATIO	0.8	0.8	..	1.7	1.3	1.3
INCOME DISTRIBUTION						
PERCENT OF PRIVATE INCOME RECEIVED BY						
HIGHEST 5 PERCENT OF HOUSEHOLDS	..	..	..	28.9	20.3	19.5
HIGHEST 20 PERCENT OF HOUSEHOLDS	..	..	..	57.7	45.1	48.9
LOWEST 20 PERCENT OF HOUSEHOLDS	..	..	..	3.2	5.7	5.9
LOWEST 40 PERCENT OF HOUSEHOLDS	..	..	..	10.7	16.8	15.7
POVERTY TARGET GROUPS						
ESTIMATED ABSOLUTE POVERTY INCOME LEVEL (US\$ PER CAPITA)						
URBAN	..	..	159.0	251.9	88.5	155.9
RURAL	..	..	135.0	200.6	71.9	97.9
ESTIMATED RELATIVE POVERTY INCOME LEVEL (US\$ PER CAPITA)						
URBAN	..	..	189.0	403.1	100.8	143.7
RURAL	..	..	34.0	258.0	42.0	87.3
ESTIMATED POPULATION BELOW POVERTY INCOME LEVEL (PERCENT)						
URBAN	..	..	55.0	24.8	46.0	22.9
RURAL	..	..	78.0	65.2	48.0	36.7

.. Not available
 . Not applicable.

NOTES

/a The adjusted group averages for each indicator are population-weighted geometric means, excluding the extreme values of the indicator and the most populated country in each group. Coverage of countries among the indicators depends on availability of data and is not uniform.

/b Unless otherwise noted, data for 1960 refer to any year between 1959 and 1961; for 1970, between 1969 and 1971; and for Most Recent Estimate, between 1973 and 1977.

/c Latin America & Caribbean; /d Low Income (\$280 or less per capita, 1978); /e Lower Middle Income (\$281-550 per capita, 1976); /f 1970-76 growth rate is 1.8 percent; /g Haitian Institute of Statistics data for crude birth and death rates and for life expectancy at birth are 36.8, 14.5 and 52.2 respectively; /h 1972.

Note: The adjusted group averages for each indicator are population-weighted geometric means, excluding the extreme values of the indicator and the most populated country in each group. Coverage of countries among the indicators depends on availability of data and is not uniform. Due to lack of data, group averages for Capital Surplus Oil Exporters and indicators of access to water and excreta disposal, housing, income distribution and poverty are simple population-weighted geometric means without the exclusion of extreme values.

LAND AREA (thousand sq. km)

Total - Total surface area comprising land area and inland waters.

Agricultural - Most recent estimate of agricultural area used temporarily or permanently for crops, pastures, market and kitchen gardens or to lie fallow.

GNP PER CAPITA (US\$) - GNP per capita estimates at current market prices, calculated by same conversion method as World Bank Atlas (1975-77 basis); 1960, 1970, and 1977 data.

ENERGY CONSUMPTION PER CAPITA - Annual consumption of commercial energy (coal and lignite, petroleum, natural gas and hydro-, nuclear and geothermal electricity) in kilograms of coal equivalent per capita.

POPULATION AND VITAL STATISTICS

Total population, mid-year (millions) - As of July 1; if not available, average of two end-year estimates; 1960, 1970, and 1977 data.

Urban population (percent of total) - Ratio of urban to total population; different definitions of urban areas may affect comparability of data among countries.

Population density

Per sq. km. - Mid-year population per square kilometer (100 hectares) of total area.

Per sq. km. agriculture land - Computed as above for agricultural land only.

Population age structure (percent) - Children (0-14 years), working-age (15-64 years), and retired (65 years and over) as percentages of mid-year population.

Population growth rate (percent) - total, and urban - Compound annual growth rates of total and urban mid-year populations for 1950-60, 1960-70, and 1970-75.

Crude birth rate (per thousand) - Annual live births per thousand of mid-year population; ten-year arithmetic averages ending in 1960 and 1970 and five-year average ending in 1975 for most recent estimate.

Crude death rate (per thousand) - Annual deaths per thousand of mid-year population; ten-year arithmetic averages ending in 1960 and 1970 and five-year average ending in 1975 for most recent estimate.

Gross reproduction rate - Average number of daughters a woman will bear in her normal reproductive period if she experiences present age-specific fertility rates; usually five-year averages ending in 1960, 1970, and 1975.

Family planning - acceptors, annual (thousands) - Annual number of acceptors of birth-control devices under auspices of national family planning program.

Family planning - users (percent of married women) - Percentage of married women of child-bearing age (15-44 years) who use birth-control devices to all married women in same age group.

FOOD AND NUTRITION

Index of food production per capita (1970=100) - Index number of per capita annual production of all food commodities.

Per capita supply of calories (percent of requirements) - Computed from energy equivalent of net food supplies available in country per capita per day. Available supplies comprise domestic production, imports less exports, and changes in stock. Net supplies exclude animal feed, seeds, quantities used in food processing, and losses in distribution. Requirements were estimated by FAO based on physiological needs for normal activity and health considering environmental temperature, body weights, age and sex distributions of population, and allowing 10 percent for waste at household level.

Per capita supply of protein (grams per day) - Protein content of per capita net supply of food per day. Net supply of food is defined as above. Requirements for all countries established by USDA provide for a minimum allowance of 60 grams of total protein per day and 20 grams of animal and pulse protein, of which 10 grams should be animal protein. These standards are lower than those of 75 grams of total protein and 23 grams of animal protein as an average for the world, proposed by FAO in the Third World Food Survey.

Per capita protein supply from animal and pulse - Protein supply of food derived from animals and pulses in grams per day.

Child (ages 1-4) mortality rate (per thousand) - Annual deaths per thousand in age group 1-4 years, to children in this age group.

HEALTH

Life expectancy at birth (years) - Average number of years of life remaining at birth; usually five-year averages ending in 1960, 1970, and 1975.

Infant mortality rate (per thousand) - Annual deaths of infants under one year of age per thousand live births.

Access to safe water (percent of population) - total, urban, and rural -

Number of people (total, urban, and rural) with reasonable access to safe water supply (includes treated surface waters or untreated but uncontaminated water such as that from protected boreholes, springs, and sanitary wells) as percentages of their respective populations. In an urban area a public fountain or standpost located not more than 200 meters from a house may be considered as being within reasonable access of that house. In rural areas reasonable access would imply that the housewife or members of the household do not have to spend a disproportionate part of the day in fetching the family's water needs.

Access to excreta disposal (percent of population) - total, urban, and rural - Number of people (total, urban, and rural) served by excreta disposal as percentages of their respective populations. Excreta disposal may include the collection and disposal, with or without treatment, of human excreta and waste-water by water-borne systems or the use of pit privies and similar installations.

Population per physician - Population divided by number of practicing physicians qualified from a medical school at university level.

Population per nursing person - Population divided by number of practicing male and female graduate nurses, practical nurses, and assistant nurses.

Population per hospital bed - total, urban, and rural - Population (total, urban, and rural) divided by their respective number of hospital beds available in public and private general and specialized hospital and rehabilitation centers. Hospitals are establishments permanently staffed by at least one physician. Establishments providing principally custodial care are not included. Rural hospitals, however, include health and medical centers not permanently staffed by a physician (but by a medical assistant, nurse, midwife, etc.) which offer in-patient accommodation and provide a limited range of medical facilities.

Admissions per hospital bed - Total number of admissions to or discharges from hospitals divided by the number of beds.

HOUSING

Average size of household (persons per household) - total, urban, and rural - A household consists of a group of individuals who share living quarters and their main meals. A boarder or lodger may or may not be included in the household for statistical purposes. Statistical definitions of household vary.

Average number of persons per room - total, urban, and rural - Average number of persons per room in all, urban, and rural occupied conventional dwellings, respectively. Dwellings exclude non-permanent structures and unoccupied parts.

Access to electricity (percent of dwellings) - total, urban, and rural - Conventional dwellings with electricity in living quarters as percentage of total, urban, and rural dwellings respectively.

EDUCATION

Adjusted enrollment ratios

Primary school - total, and female - Total and female enrollment of all ages at the primary level as percentages of respectively primary school-age populations; normally includes children aged 6-11 years but adjusted for different lengths of primary education; for countries with universal education enrollment may exceed 100 percent since some pupils are below or above the official school age.

Secondary school - total, and female - Computed as above; secondary education requires at least four years of approved primary instruction; provides general vocational, or teacher training instructions for pupils usually of 12 to 17 years of age; correspondence courses are generally excluded.

Vocational enrollment (percent of secondary) - Vocational institutions include technical, industrial, or other programs which operate independently or as departments of secondary institutions.

Pupil-teacher ratio - primary, and secondary - Total students enrolled in primary and secondary levels divided by numbers of teachers in the corresponding levels.

Adult literacy rate (percent) - Literate adults (able to read and write) as a percentage of total adult population aged 15 years and over.

CONSUMPTION

Passenger cars (per thousand population) - Passenger cars comprise motor cars seating less than eight persons; excludes ambulances, hearses and military vehicles.

Radio receivers (per thousand population) - All types of receivers for radio broadcasts to general public per thousand of population; excludes unlicensed receivers in countries and in years when registration of radio sets was in effect; data for recent years may not be comparable since most countries abolished licensing.

TV receivers (per thousand population) - TV receivers for broadcast to general public per thousand population; excludes unlicensed TV receivers in countries and in years when registration of TV sets was in effect.

Newspaper circulation (per thousand population) - Shows the average circulation of "daily general interest newspaper", defined as a periodical publication devoted primarily to recording general news. It is considered to be "daily" if it appears at least four times a week.

Cinema annual attendance per capita per year - Based on the number of tickets sold during the year, including admissions to drive-in cinemas and mobile units.

EMPLOYMENT

Total labor force (thousands) - Economically active persons, including armed forces and unemployed but excluding housewives, students, etc. Definitions in various countries are not comparable.

Female (percent) - Female labor force as percentage of total labor force.

Agriculture (percent) - Labor force in farming, forestry, hunting and fishing as percentage of total labor force.

Industry (percent) - Labor force in mining, construction, manufacturing and electricity, water and gas as percentage of total labor force.

Participation rate (percent) - total, male, and female - Total, male, and female labor force as percentages of their respective populations. These are ILO's adjusted participation rates reflecting sex-sex structure of the population, and long time trend.

Economic dependency ratio - Ratio of population under 15 and 65 and over to the labor force in age group of 15-64 years.

INCOME DISTRIBUTION

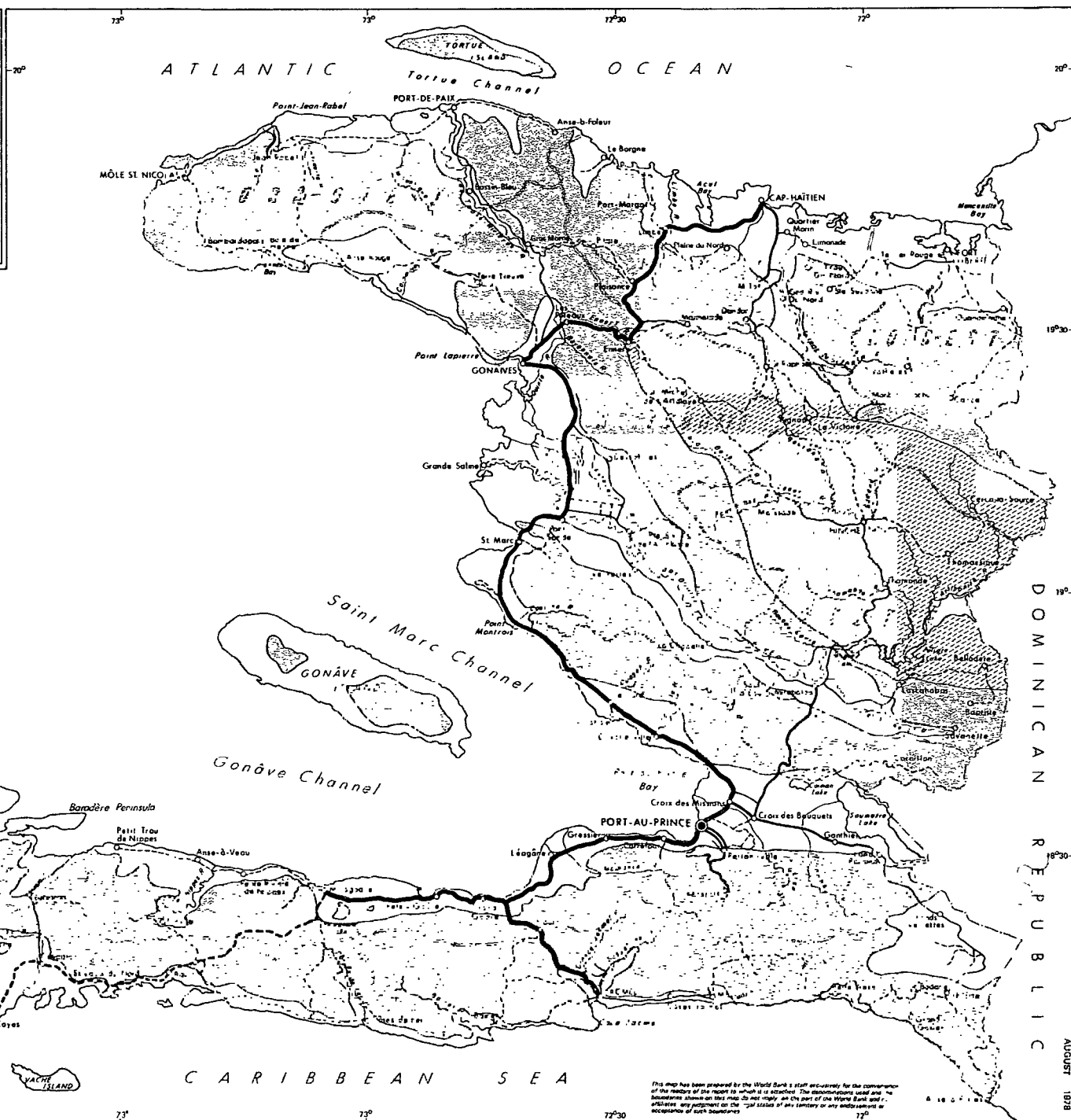
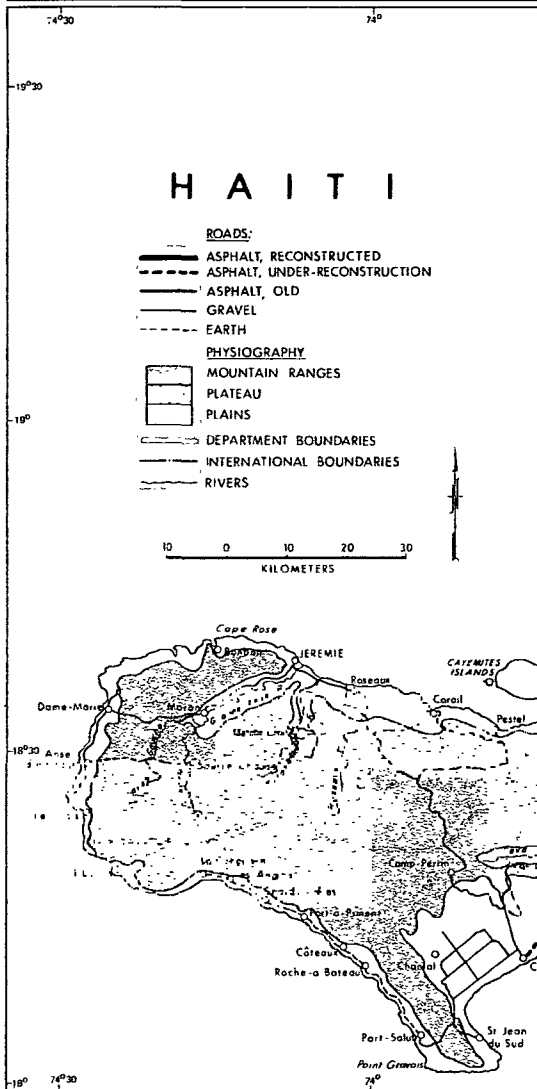
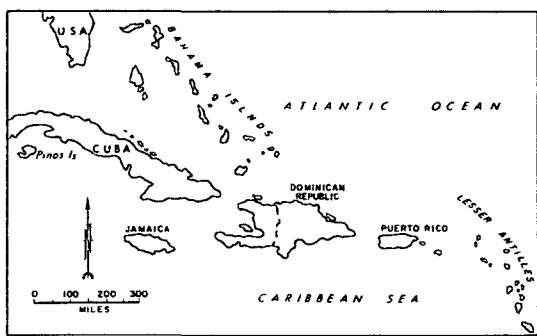
Percentage of private income (both in cash and kind) received by richest 5 percent, richest 20 percent, poorest 20 percent, and poorest 40 percent of households.

POVERTY TARGET GROUPS

Estimated absolute poverty income level (US\$ per capita) - urban and rural - Absolute poverty income level is that income level below which a minimal nutritionally adequate diet plus essential non-food requirements is not affordable.

Estimated relative poverty income level (US\$ per capita) - urban and rural - Relative poverty income level is that income level less than one-third per capita personal income of the country.

Estimated population below poverty income level (percent) - urban and rural - Percent of population (urban and rural) who are either "absolute poor" or "relative poor" whichever is greater.



This map has been prepared by the World Bank staff exclusively for the convenience of the readers of the report to which it is attached. The boundaries shown on this map do not necessarily represent the official boundaries of the Republic of Haiti and are not intended to be taken as an endorsement or acceptance of such boundaries.

LIST OF ABBREVIATIONS

ADELA/TEC	Asociacion para el Desarrollo Economico para America Latina/Technical and Management Services Co., (S.A.)
BCA	Bureau de Credit Agricole
BDL	Banque du Logement
BHPI	Bureau Haitien de Promotion Industrielle
BNRH	Banque Nationale de la Republique d'Haiti
BPH	Banque Populaire Haitienne
CAMEP	Centrale Autonome Metropolitaine d'Eau Potable
CCHFP	Centre Canado-Haitien de Formation Professionnelle
CHISS	Centre Haitien d'Investigations en Sciences Sociales
CONADEP	Conseil National de Developpement et de Planification
CONATEL	Compagnie Nationale de Telecommunications
COSEPA	Comite Sectoriel de Politique Agricole
DATPE	Division de L'Amenagement du Territoire et de la Protection de l'Environnement (CONADEP)
DCI	Department of Commerce and Industry
DPPD	Division de Promotion des Projets de Developpement (CONADEP)
DRIPP	Developpement Regional Integre de Petit-Goave a Petit Trou de Nippe
DTPTC	Departement des Travaux Publics, Transports et Communications
FAO	Food and Agriculture Organization
FCH	Federation for Cooperative Housing
IDA	International Development Association
IDAI	Institut de Developpement Agricole et Industriel
IDB	Inter-American Development Bank
IHS	Institut Haitien de Statistiques
IICA	Instituto Inter-Americano de Ciencias Agricolas

ILO	International Labour Office
INAREM	Institut National des Ressources Minerales
INFP	Institut National de Formation Professionnelle
OAS	Organisation of American States
OFATMA	Office d'Assurances Accidents du Travail, Maladie et Maternite
OMS	Organisation Mondiale de la Sante
ONA	Office National d'Assurance
ONL	Office National du Logement
OPS	Organisation Pan-Americaine de la Saute
OTC	Organization for Technical Cooperation
OXFAM	Oxford Committee for Famine Relief
PADCO	Planning and Development Collaborative International
PAHO	Pan-American Health Organizations
PPHC	Projet de Planification Physique, Habitation et Construction
SAT	Service Autonome des Transports
SEN	Societe d'Equipement National
SENACA	Service National de Commercialisation Agricole
SEPRN	National Road Maintenance Service
SNEP	Service National d'Eau Potable
SLELC	Service de Location d'Equipement Lourd de Construction
SONAPI	Societe Nationale des Pars Industrielle
SPU	Service de Planification Urbaine
SU	Service d'Urbanisme
UNCDF	United Nations Capital Development Fund
UNCHBP	United Nations Centre for Housing, Building and Planning
UNDP	United Nations Development Program
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
WHO	World Health Organization

MAJOR CONCLUSIONS AND RECOMMENDATIONS

i. This report pursues twin objectives. The first is to assist in the formulation of an urban strategy for the country by providing an analytical overview of the facts and problems of urban development in Haiti. The second is to identify, within this overall framework, those problems which World Bank Urban Lending can help to address, with particular emphasis on the improvement of the lot of the urban poor. Facts and arguments are summarized at the end of each chapter and only the most salient features are recalled here.

ii. Haiti already has a grave urban poverty problem. Although less urbanized than the other Latin American countries, with less than a quarter of the population living in urban areas, some two-thirds of Haiti's urban population have to derive income from informal sector activities at rates that leave up to 60% of the population of the capital and up to 80% of the population in provincial towns unable to reach minimum levels of food and non-food consumption. As an illustration, the latest nutrition survey made in 1974/75 showed that some 83% of all children in the country suffer from different degrees of malnutrition, urban areas being slightly worse off than rural areas. Poverty is also reflected in urban service deficiencies. Over 40% of the Port-au-Prince population live in areas with residential density above 800 and in some cases more than 2,000 per ha. More than 3 out of 4 houses in the city are not connected to the water system and organized solid and liquid waste removal practically does not exist in low-income areas. (Section I-B and Chapter III.)

iii. The urban poverty problem is not likely to improve rapidly. With total population growth of about 1.8% p.a. agriculture, which presently employs some three-quarters of the total labor force in the country cannot and should not be expected to absorb more labor. The incremental labor force will have to find non-agricultural sources of income, predominantly in the urban areas, where the labor force will grow by 4% p.a. in the coming years. With the small modern manufacturing sector, modern services, crafts and construction all expected to absorb only a fraction of the additional labor force, the bulk of the increase will end up in informal activities. The proportion of the labor force active in the informal sector will decline only very slowly and the number of people depending on such activities will rise very rapidly in absolute terms, making it likely that average earnings in informal activities will decline further relative to formal sector income earning possibilities. (Chapter II.)

iv. Sixty percent of the urban population live in the Port-au-Prince metropolitan area. The predominance of the capital is still growing, with annual population increases of 5-6% compared to the growth of the rest of the urban population at less than 3%. Even more strikingly, the capital has a near monopoly on public administration, financial services, commerce and liberal professions and is home to some 92% of modern manufacturing employment. Recent economic growth has reinforced the position of Port-au-Prince, since it has been concentrated in assembly-type industries for export which are exclusively located in the capital. Immediate prospects are good for these industries and the locational advantage of the capital is such that its weight in the modern manufacturing sector is likely to be largely maintained. (Section II-B.)

v. The importance of the city is also supported by the centralized decision-making system of the government. All decisions of substance are taken in Port-au-Prince. For example, any expenses from the meagre municipal budgets other than the bare minimum of obligatory current expenditure have to be approved and vetted by the Central Government in the capital. Within government services, even routine decisions are often made by top staff. This leads to apathy and indifference at the lower echelons and makes it particularly difficult to post staff to the provinces. Most government institutions have no provincial representative and those that have, give them very little autonomy. (Sections I-C and IV-A.)

vi. The predominance of the capital is further supported by and reflected in the expenditure patterns of the public sector and by sectoral policies. For example in 1975/76, some 49% of the public development expenditure affected the metropolitan area and although this proportion may well fall to below 30% in the 1976/81 period, this share is still well above the capital's share of the population. In many areas, policies are ill-defined and where they are not, they often favor Port-au-Prince or are at best neutral. Long-term industrial credit, for example, is practically not available outside of the capital. ^{1/} Educational investments have been concentrated heavily in the capital and general infrastructure provision is much better there, although still far from adequate. (Sections I-C and I-D.)

vii. The government has decided to put more emphasis on rural development, and the share of agriculture in development expenditure is planned to more than double to 22% of the total from the first to the second Five-Year Plan. More emphasis than in the past will also be put on the provincial towns. The financial feasibility of such an approach depends on foreign assistance continuing to develop at the same pace as it has done recently. The demographic consequences of a successful implementation of this option could be considerable. If historical trends continue, the Port-au-Prince population would reach 2.2 million at the beginning of the next century, but if the government's two-fold strategy is successful, it might amount to only 1.6 million. The difference between the two figures is close to the present size of the Port-au-Prince population. Slowing down the growth of the capital could be important. Sometime in the future, steep rises in the marginal cost of agglomeration can be expected, in particular because the city will start encroaching on some of the best agricultural land in the country, and adequate water supply may require very heavy investments in additional supply facilities, for example long distance water transport. (Sections I-D, V-A and V-B.)

viii. In line with this decentralization strategy, provincial towns should become centers for providing agricultural input and output processing facilities to support the key agricultural development effort. The speed with which they need to be equipped to assume this role must be tailored to the pace of present and potential development of agriculture in their hinterland, as this

^{1/} The Bank's First and Second Education Projects in Haiti are first steps towards correcting this bias in educational investments.

will be the mainstay of their prosperity for years to come. They might also be developed to become general service centers for the surrounding areas, in particular in those sectors where Port-au-Prince is now much better equipped than provincial towns, such as education and health. Diverting additional resources to the provincial towns for these purposes would probably entail very little, if any, sacrifice in national output. ^{1/} Port-au-Prince, however, will continue to remain for the time being the preferred location for assembly-type industrialization because of its considerable locational advantages for such activities and because making provincial centers competitive with the capital would require extremely heavy infrastructure investments. (Section V-B.)

ix. The general decentralization objective of the government, is however, far from implementation. Government services are just beginning to decentralize their services to the provinces and some with very great difficulty. The institutional and data base for effective decentralization is in fact not yet available. One key provision that would help this effort would be a strengthening and devolution of authority to the municipalities. Municipal elections are planned later in 1979 and that could provide the springboard for such devolution of authority. At the same time, those ministries that are planning to decentralize some of their staff to the provinces or have been instructed by law to do so should be encouraged to give that staff greater autonomy than in the past and to group them into technical support services for the municipalities so that a decentralized decision-making structure backed up by technical advice can gradually develop. Sectoral policies should also be formulated with explicit regard to the decentralization objective of the government. (Sections I-D and IV-C.)

x. As was mentioned before, the present excessive centralization of decision-making in the government in Port-au-Prince has negative effects not only on the performance of local institutions in the provinces, but also on general institutional performance. This is reinforced by a series of other general factors that combine to weaken institutional effectiveness. Among these are: the low status of the civil service due to low salaries, little job security and a great deal of uncertainty regarding job responsibilities; the overlap and uncertainty in institutional mandates; the general lack of coordination between many institutions and the very pervasive shortage of skilled manpower. These mutually reinforcing factors combine to put institutional questions at the center of the major urban management problems in the country. (Section IV-A.)

xi. Foreign assistance agencies, have tended to create separate institutional structures to carry out their projects, which are often only loosely attached to existing government services. As a result, they have increased the competition among various services and project units for qualified staff and the implementation of their projects has not always strengthened the regular institutions of the government as much as is desirable. Where institution-building has been the primary purpose of foreign assistance, it has often been frustrated by lack of suitable counterpart staff, by unclear

^{1/} See beginning of Section V-A and the last part of Section V-B.

counterpart obligations and lack of enforcement of whatever obligations were laid down and by the tendency not to give the Haitian staff sufficient management responsibility. These problems have been compounded by the way many foreign assistance agencies choose their consultants, which has made it difficult to control the quality of foreign staff and the cohesiveness of assistance teams. All too often, the work carried out has been mediocre, linguistic problems have arisen and commitments to train counterparts have not been honored. When foreign assistants leave, the institutions that were assisted are frequently unable to continue the work. Experience with institution-building through foreign technical assistance has, therefore, been mixed at best and has been successful only in those cases where the projects were tailored to fit the institutional capacity of the cooperating institutions rather than the reverse and where foreign and domestic staff were carefully chosen and controlled. (Section V-C.)

xii. Institutional weakness pervades all institutional levels relevant for urban development and determines the absorptive capacity for additional financial assistance. On the general urban management level, the previously unclear and partly overlapping mandates of DATPE and the SU have been clarified to some extent in the new organic laws of the DTPTC and the Ministry of Planning which were enacted during 1978. A similar clarification of the role of the municipalities in urban management would be helpful; some of the functions now fulfilled by the DTPTC might be given to them. The municipalities, however, have a narrow and far from buoyant financial base and lack the technical expertise and organizational ability to carry out any significant urban planning functions. They may require substantial technical assistance to do so. This has not so far been forthcoming. (Section IV-C.)

xiii. Generally speaking, the absence of a land use policy and of effective means for its implementation is one of the major gaps in the existing framework for urban development. Procedures for formulating a policy for land use in general and public land use in particular should be developed as a matter of urgency. Both for the formulation of such a policy and for its effective implementation, a considerable amount of technical work is required. This involves establishing up-to-date cadastres, which are not now available, managing publicly-owned land, which is presently not even inventoried and advising on property taxation, betterment levies and land transfer taxes as means of interventions. It also involves an overhaul of the property valuation and tax collection procedures to make them more equitable and provide a better financial base for municipal finance. Since the Administration Generale des Contributions is already active in some of the above fields, it should be charged with this technical work, but may require general technical assistance to carry it out. (Section IV-B.)

xiv. While the basic town planning legislation does have some important gaps, the major problem really lies with implementation of those provisions that already exist. While it would be helpful to modernize the town planning legislation, the bulk of which dates back to the mid-thirties, it is not necessary to wait for its reformulation in order to improve institutional performance. Such improvement can be undertaken in a variety of cases identified in this report. It should proceed gradually and, initially, should tackle a small number of institutions. (Chapter IV.)

xv. With a view to formulating an urban development project to be supported by the World Bank group, several key problems require attention. In shelter, for example, two institutions are or will be active in Haiti, with mandates that overlap to a significant extent, i.e., and the ONL and the BDL. The project implementation unit for the UNCDF shelter projects in Port-au-Prince, which was initially conceived as a separate institution, will now work under the umbrella of the ONL. It is important that this project unit be fully absorbed into the ONL as rapidly as possible and that the future institutional relationships between the ONL and the BDL be clearly outlined so that they can concentrate on specific parts of the shelter problem. (Sections III-A and V-C.)

xvi. More generally, public intervention in low-income shelter has been confined in the past to emergency relocation after disasters or major relocation requirements arising from other projects, such as the expansion of the Port-au-Prince port facilities. No more than 18,000 people have been given some public assistance in shelter since 1970, mostly through the provision of sites without any services in Port-au-Prince. This is less than one year's population increase in the capital. The broadening of public low-income shelter intervention has been severely hampered in the past by the prevailing view of public officials that only houses built to certain standards, such as concrete-block walls and metal sheet roofs are valid shelter for the poor. These standards are too high to be affordable by the low-income population and therefore, in parallel, many public officials consider it unrealistic to expect to recover a significant part of the cost of low-income shelter provision from beneficiaries. Given the overall shortage of financial resources and, in particular, current budget revenues in the country, this has stymied any effort to provide public shelter assistance to the bulk of the low-income population. While the UNCDF pilot projects for slum upgrading and sites and services provision in Port-au-Prince were initially expected to modify these traditional ideas by demonstrating the feasibility of an approach similar to that of the World Bank, it is unlikely that they will do so fully. In particular, standards in these projects have been raised in successive stages to a level where cost recovery appears difficult, even if it were pursued as a major project objective, which it is not. It has to be noted, however, that the attitude of public officials may now be changing, following the endorsement of the sites and services approach to low-income shelter by the President of the Republic. (Section III-A and V-C.)

xvii. Any Bank intervention in slum upgrading would have to adopt lower standards than those now planned in the UNCDF slum upgrading project in St. Martin. The cost of extending the standards of the UNCDF project to the rest of the Port-au-Prince slum population would exceed US\$30 million at 1976 prices, not counting the high technical assistance cost of the project, nor its needed extension to the provincial cities. It is not only required to adopt lower standards for slum-upgrading and to limit the range of interventions to some key service provisions, for example water supply and better access roads and pathways; massive parallel improvements in the delivery of other urban services by the relevant institutions are also essential. While area-specific slum upgrading or sites and services projects can serve to experiment with and develop appropriate site-specific techniques for delivery

and to demonstrate the feasibility of given approaches, they cannot by themselves do justice to the scale of the problem and cannot substitute for direct efforts aimed at the institutions involved. Actions such as the UNCDF project in St. Martin, for example, may clear the rubbish and the human waste and may reduce the flooding in that community, but will not stop the waste entering from other parts of the city, nor the effect upon the residents of the conditions in the central market where many spend half of each day, nor will they limit consumption by residents of food and water contaminated elsewhere in the city. (Sections III-A and IV-E.)

xviii. Among the problems that require attention, the appalling drainage/flooding/erosion and garbage removal situation in the capital is going to be addressed by a forthcoming IDB project which will cost over US\$45 million. However, this project does not cover some of the worst slum areas in the city located in Boston and Brooklyn, it does not include upgrading of the human waste collection and disposal in the city, nor does it address the urban sanitation problems in the provincial towns. The three towns that were investigated in this report, i.e., Cap Haitien, Gonaives and Les Cayes all have similar problems with human waste collection and disposal, drainage, garbage removal and, in the case of Cap Haitien, also with erosion. It is probable that other towns in Haiti's provinces have similar drainage and waste removal problems. These gaps will need to be filled. (Sections III-B and III-E.)

xix. The water problem is being addressed in 10 provincial cities by two parallel water upgrading projects financed by the World Bank and by the UN. In Port-au-Prince, however, water problems will remain acute, since past investments in water supply and distribution have overtaxed the administrative and management capacity of CAMEP, the water supply authority. Any further improvement of the water system in the city is now dependent upon a substantial upgrading of the management capacity of CAMEP. A recent reform of the management and salary structure of the institution will have to be followed by a revision in the tariff structure and a number of other actions designed to improve the financial position of CAMEP and to reduce the 50% loss rate in the system. More importantly, future water availability is in doubt. There is no hydrological survey of the metropolitan area and no long-term water plan. IDB stands ready to finance both the survey and the development of a master plan to the end of the century, but the request for this finance has been very slow in coming. It should be initiated as soon as possible. (Section III-C.)

xx. In the meantime, the burden of the water situation in Port-au-Prince falls very heavily on the lower income population. About three-quarters of the population consume less than 30 litres per caput per day and, even at these low consumption levels, a family with an income of US\$40 dollars per month would have to spend some 12% on water. The regressive aspects of water pricing and the private water market in the city could be expected to be alleviated if CAMEP's present plans for tariff reform and expansion of the distribution system through much heavier emphasis on public fountains are realized. This alone would provide a significant impact on the low-income population. Only modest amounts of finance are needed to install public fountains. (Section III-C.)

xxi. Some institutional reforms are also required in urban employment promotion. For example, a situation is now developing where several industrial promotion efforts will be working parallel to each other and previous experience fails to justify great optimism as to how well they will coordinate their interventions. The DCI should be encouraged to rationalize its promotion effort and to make sure that it is consistent with industrial promotion pursued by other institutions that are not under its jurisdiction, such as the IDAI and its subsidiaries. Similarly, the recently created National Crafts Council has such a wide mandate that institutional conflict with other parts of the government appear likely. In addition, the craft promotion cells in four government ministries were not abolished and, if they continue to exist, they may preempt much of what the Council is supposed to do and reduce it to a purely coordinating role. This should not be allowed to happen, since a comprehensive and dynamic approach to craft development is required. (See IV-D.)

xxii. Similarly, a comprehensive approach to construction industry development should be undertaken. Construction industry may be one of the most promising areas for substantial employment creation. The prosperity of the industry will largely depend on the development of institutional housing finance, which is practically non-existent. Whatever finance is available has very short maturities with a maximum of eight and a half years. The creation of the BDL is expected to improve the situation, but, if present thinking of some of the key staff involved in setting up the Bank prevails, the BDL will only address the finance needs of families with incomes of \$200 per month or more, which would exclude some 95% of the urban population from access to finance from BDL. Much as the creation of the BDL would improve the situation and should therefore be pushed vigorously, the bulk of the population would still have no access to housing finance. Mechanisms must be developed to reach down to much lower income levels. Also, little is known about the problems of the construction industry and the DCI should be asked to analyze it and to develop a support program as needed. It might also be suggested that research into low-cost building techniques should be undertaken. Ideally, this might be sponsored by the ONL if and when adequate technical assistance can be provided for that purpose. In the meantime, the DTPTC could collaborate in that effort. (Section II-D and III-A.)

xxiii. Any Bank intervention in the urban sector in Haiti is also conditioned by the fact that, while provincial towns should be given priority as far as feasible, the service delivery needs of Port-au-Prince cannot be neglected. As a minimum, present and future urban residents should be extended the service delivery necessary to assure minimum public health and safety standards and protection from the elements. In addition, the Bank's intervention must be placed in the context of the urban-related activities of other foreign assistance agencies. UN agencies and the IDB have so far been the only ones active in questions of overall management for urban service and shelter delivery. The IDB has concentrated its interventions on Port-au-Prince, in particular on the port, the industrial estate, the water system and now, in its forthcoming project, on the important erosion, drainage and solid garbage removal problems. UN agencies have supplied overall

technical assistance to some of the urban management institutions and UNCDF has recently agreed to finance water supply to some provincial towns and the two pilot projects for sites and services and slum upgrading in the capital. Other assistance agencies have only minor urban involvements, including those that happen more or less incidentally in the conduct of regional development projects such as DRIPP. 1/ Canada and the Federal Republic of Germany are also known to be interested in power supply for provincial towns and France has agreed to rehabilitate the airfield in Cap Haitien. The Government should insist on better coordination of these urban-related activities, which is practically left to chance at the present time. (Chapters II and III and Section V-B.)

xxiv. From the point of view of the Bank the following priorities can be established. The highest priority should be given to the improvement of the central market in Port-au-Prince. It has an overwhelming importance in the informal sector activities not only in Port-au-Prince, but also in the provinces. It provides the bulk of the employment for the low-income population and is the major origin and destination of urban transport demand. It handles the bulk of the produce entering the city and it is affected by severe flooding, garbage accumulation, risks of human waste contamination and resulting health hazards. It is also important to investigate the location of the central market since its growth is constrained in its present location and the market may have to be decentralized to the southern and northern edges of the city. This decentralization is presently under study. If adopted, it would have profound impacts on low-income employment, shelter demand and overall land use in the city. (Section V-D.)

xxv. While focusing on the market problem in Port-au-Prince, a possible Bank supported project should be broader and address other problems, some of which concern the entire urban sector. The following components seem to be the most important (Section V-D):

- (a) comprehensive support to the informal sector 2/;
- (b) improvement in human waste disposal in Port-au-Prince and in provincial towns including the needed research and experimentation for appropriate disposal methods in marshy areas;
- (c) a sites and services component, possibly in one or two provincial towns to demonstrate the feasibility of the approach propounded by the Bank and to start the strengthening of shelter delivery institution;

1/ Developpement Regional Integre de Petit-Goave a Petit Trou de Nippes, a Canadian-financed regional development effort.

2/ See Section II-D for more discussion.

- (d) general technical assistance to the Direction Generale des Contributions for the technical work required to prepare and later on implement a land use policy and, more particularly, for the reestablishment of a usable cadastre, and the improvement of property tax valuation and collection in order to improve the financial base of the municipalities. Also, general technical assistance for the organizational and management improvement of the municipalities should be considered;
- (e) health and particularly nutrition improvement in view of the serious nutritional situation in urban areas.

xxvi. In the medium term, a larger sites and services program could be envisaged, on condition that the project component included above and the UNCDF effort in this area establish the feasibility of such a program. Before embarking on such a program, general upgrading of urban service delivery institutions as planned under the forthcoming IDB loan and suggested for the Banks' first urban project above concerning drainage, garbage removal and human waste collection must be shown to be progressing successfully. Such a program could in priority help a selected number of provincial towns with their foreseeable problems over, say, a five-year period, while the problems in Port-au-Prince could be addressed only in part, since the growth of the city is such that the financial requirements for sites and services to accommodate all of this growth would be initially too high. (Section V-D.)

xxvii. Linked to such a sites and services effort should be a component to provide industrial and commercial sites in provincial towns as well as craft workshops. This might be associated with credits for investment and working capital and with the required technical assistance. An investigation into the needs and the scope of such requirements has to be made before a component of this type could be formulated. (Section V-D.)

xxviii. Subsequently, or preferably in parallel with a sites and services program, a slum upgrading program could be initiated. This would not be too difficult in the provincial towns, since their slum problems are relatively circumscribed and manageable, but it would require a staged approach in Port-au-Prince. The strategy for upgrading the slums in Port-au-Prince, where some 320,000 people presently live, should be to upgrade in priority those slums located upstream of the St. Martin/UNCDF project area, so that less rubbish gets flushed down into it. Next, it would be important to address the problems of the marshy areas in the northern part of the city, i.e., Boston, Brooklyn, Cite Simone, where conditions are particularly appalling. (Chapter III and Section V-D.)

xxix. In all projects and project components, technical assistance to the institutions involved needs to be defined and conducted with particular care. Problems have arisen in the past with foreign technical assistance and very careful attention will have to be paid to the cause of success or failure in these efforts to try and avoid the more obvious pitfalls. (Section V-D.)

CHAPTER I: THE SPATIAL DIMENSION OF HAITI'S SOCIOECONOMIC SYSTEM

A. DEMOGRAPHIC FEATURES

Overall Trends

1.01 The estimated 1976 population in Haiti of 4,668,000 has been growing at the relatively low annual rate of 1.6% from 1950 to 1971 and at about 1.8% since then. These low growth rates result from a comparatively low natural growth of 2.2% p.a. and substantial emigration of 0.4% p.a. The natural growth rate results from a gross birth rate of 36.8% and a high mortality rate of 14.5%, which is heavily influenced by very high infant mortality of 149.1%. 1/ Life expectancy at birth is 52.2 years.

Urban and Rural Population Growth

1.02 Population growth is very unevenly distributed across the country because of regional differences in natural growth and substantial internal migration. The urban population 2/ grew at an average rate of 4.1% p.a. and the rural population at only 1.1% (see Table 1.1 in the Annex). The urban population's share in the total nearly doubled from 12.2% in 1950 to an estimated 23.1% in 1976 and the total urban population is estimated at 1,079,000 for that year.

1.03 The urban population is highly concentrated in the Port-au-Prince metropolitan area which accounted for about 60% of the total in 1976. Its growth, by 5.9% between 1950 and 1971 and by 5.2% since then, outpaced that of any other administrative unit in the country and accounted for more than 70% of all urban population growth. The weight of Port-au-Prince in the urban sector is, therefore, still growing with more than half of the growth rate, i.e. 3%, due to net immigration. The remainder of the urban population grew at annual average rates of 2.4% (1950/71) and 2.7% (1971/76) with some towns, such as Cap Haitien, Port-de-Paix, Gonaives, Hinche, etc., growing at over 3% p.a. (see Table 1.1 in the Annex).

1.04 The urban sector in Haiti is thus extremely unbalanced (54,000 inhabitants) and, in 1975, Port-au-Prince (653,000 inhabitants) was almost 12 times the size of Cap Haitien (54,000 inhabitants), the second largest town in the country (see Table 1.3 in the Annex). While such dominance is not unique, Port-au-Prince virtually monopolizes urban activities and retards the development of provincial towns. This is especially marked with regard to economic activities with some 90% of industrial activities concentrated in the Port-au-Prince area, and it is supported by a strongly centralized political and administrative system.

1/ Some estimates are as high as 200 ‰.

2/ There is no clear definition of the urban population in Haiti. What is considered a town and therefore a part of the urban sector is rather a matter of custom, and the smallest towns have little more than 1,000 inhabitants.

1.05 Population growth in rural areas was also uneven. Whereas the rural sector as a whole experienced net emigration and grew at little more than 1% p.a., population in some rural areas rose at or even slightly faster than the rate of natural increase. In some areas, net migration was so strong that the total resident population decreased.

Migration

1.06 The spatial pattern of population growth thus reflects intensive international and internal migration but specific migration data are available only for 1973 (see Table 1.4 in the Annex). International migration is estimated at 0.4% p.a. and is reported to originate mostly from the old Department de l'Ouest, 1/ essentially the Port-au-Prince area. Internal migration follows the strong polarization of Haiti's socioeconomic system and net immigration into the Departement de l'Ouest with Port-au-Prince as the main destination originates primarily in the four peripheral departments. Emigration is particularly strong from the old Departement du Sud, probably mainly from its northern part, the present Departement de la Grande Anse (see Tables 1.1 and 1.4 in the Annex).

1.07 Very little is known on specific migration patterns. However, a survey on the impact of migration on housing conditions in Port-au-Prince, carried out in 1972, suggests that the bulk of migration is a one-stage process from rural areas directly to Port-au-Prince without a temporary stay in an intermediate place. 2/ There is also some interurban migration, especially between provincial towns in the southern, northern, and western departments and the Port-au-Prince metropolitan area (see Table 1.5 in the Annex). Such exchange as takes place between rural areas is more of a seasonal nature and is related to harvesting.

1.08 Three main factors seem to govern the migration process in Haiti: the desire for work and higher income 2/, the desire for better education, 2/ and the security offered by the extended family. 3/ Although the existing urban-rural and interurban average income differentials may appear to be a very simple motivation for migration into the Port-au-Prince area, the underlying situation is quite complex. Overall population density is very high with 605 inhabitants per km² of arable land in 1976, marginal land is already

1/ The new subdivision of the territory into nine departments was adopted by law on August 23, 1976.

2/ H. de Ronceray: Impact des migrations internes sur les conditions du logement a Port-au-Prince, in: Les Cahiers du CHISS, September 1976.

3/ See U. Locher: Rural-Urban migration and the alleged demise of the extended family: The Haitian case in comparative perspective. Centre for Developing Area Studies, McGill University, Montreal, August 1977 (Working Paper No. 20).

under cultivation, land holdings are very fragmented and disguised unemployment in agriculture is widespread. Thus, present and potential income in rural areas is low and potential rewards from rural-urban migration are correspondingly high. These rewards, however, may be perceived to be higher than they actually are. Even if unskilled labor can command higher rates of pay in urban areas than in rural areas, high open and disguised unemployment in urban centers can considerably reduce the income that can actually be obtained. For the lowest income strata, the rural-urban differentials may actually disappear (see Table 1.7 in the Annex). Nonetheless, this average income differential contributes to shaping the aspirations of the potential migrant, as may be the chance of hitting a "one-time high income" or of better access to some basic services.

1.09 One of the prime motives for migration appears to be education, which is considered to be one of the population's fundamental values. This is not surprising in Haiti where chances for education are particularly poor in rural areas because access to schools, where they exist, is difficult and overall enrollment is low, curricula are of little relevance to rural pursuits and drop-out rates are high, student-teacher ratios are high and teaching intensity correspondingly low. Besides those migrants that seek better educational opportunity, there are also those that have obtained some education, especially people from provincial towns, who seek better employment opportunities corresponding to their acquired skills by migrating to the Port-au-Prince area. While improvement in educational opportunities in the provinces might reduce the first type of migration, it would increase the pool from which the second type is fed. Educationally-motivated migration might not abate as long as Port-au-Prince remains the dominant center for employment of the educated.

1.10 Whereas the economic and educational motivations may be considered as primary stimulants of migration, the extended family tends to reinforce the process by inducing chain migration. Rural-urban migration in Haiti does not result in isolation and alienation and strong rural family ties are maintained. The urban members of the kinship provide a foothold for a whole migration chain providing additional migrants with shelter and other help as basic security when they arrive in the city. ^{1/} Migrant households, therefore, tend to expand rapidly.

1.11 Migration is basically a reaction to the spatial differential in socioeconomic opportunities as perceived by the population. Any spatially-oriented development strategy has to address the factors underlying the migrational motivation such as employment and income opportunities as well as access to education and other infrastructural facilities.

B. SPATIAL DIFFERENTIALS IN SOCIOECONOMIC CONDITIONS

1.12 In order to understand the spatial dynamics of Haiti's socioeconomic system and especially the migration process, it would be desirable

^{1/} U. Locher, op. cit.

to measure the socioeconomic conditions in the different regions by means of a whole set of socioeconomic indicators. Unfortunately, available statistical information does not allow in-depth analysis on the regional level and we have to limit the description of existing spatial differentials to a few very general indicators.

Rural-Urban Income Differential 1/

1.13 Haiti, with an average GDP per caput of only US\$219 in 1976, 2/ is the poorest country of the Americas and among the 30 poorest countries in the world. Moreover, according to estimates based on a recent survey, average income differences between the different parts of the country are of the order of 1:7 (see Table I-1) so that the average per caput income in rural areas reaches only slightly more than half the national average, whereas average income in the relatively privileged Port-au-Prince area is about 3.5 times the national average. The interregional distribution of "labor income", which accounts for about 61% of national income, 3/ is less unequal than that of total national income. The relation between per caput labor income in rural areas, provincial towns and Port-au-Prince is 1 to 1.3 to 2.2, compared to 1 to 3.9 to 6.7 for total per caput income. This is due to the heavy concentration of commercial and industrial activities in urban areas, particularly in Port-au-Prince.

Table I-1: AVERAGE NATIONAL INCOME PER CAPUT, BY REGION, HAITI 1976

	Country Total	Urban Areas			Rural Areas
		Total	Port-au-Prince Metropolitan Area	Other Towns	
<u>Labor Income</u>					
Gourdes	581.9	891.0	1107.1	636.3	504.4
% (rural areas = 100)	115	177	220	126	100
<u>Total National Income</u>					
Gourdes	951.8	2735.3	3400.0	1958.8	504.4
% (rural areas = 100)	189	542	672	367	100

Source: See Annex Tables 1.6 and 1.7.

- 1/ See also Technical Note on the Compilation of Income Distribution Statistics, accompanying Tables 1.6 and 1.7 in the Annex.
- 2/ World Bank Atlas methodology, 1975/77 base period.
- 3/ The concept used here does not correspond to the normal definition of labor income compared to income from entrepreneurship and property. The survey data follows the normal concept, but was incomplete and required additional estimates of agricultural income. Most of the agricultural income is generated by self-employed persons and would normally be classified as income from entrepreneurship and property but was classified here as labor income. This seems to be more appropriate in the Haitian context.

1.14 Compared with income distribution data for 1970, 1/ the present interregional differential has changed under the influence of recent economic development and inflation. For example, the interregional distribution of labor income between rural areas, provincial towns and Port-au-Prince stood at 1 to 1.5 to 2.0 in 1970. The change to 1 to 1.3 to 2.2 in 1976 probably reflects some of the distributional effects of inflation. Agricultural prices and, thus, the bulk of incomes in rural areas kept pace with inflation (see Annex Table 1.3) while provincial urban labor incomes lost ground. The increase in the weight of Port-au-Prince is the result of two conflicting trends. Some Port-au-Prince labor income also lagged behind inflation rates, such as civil service salaries which increased only by 6.1% p.a., while consumer prices rose by 13.5% p.a. However, recent economic development was mainly fueled by industry, commerce, and construction; 2/ i.e., activities that are highly concentrated in the Port-au-Prince area, and the concomitant rise in labor incomes may have more than compensated for the depressing effect of inflation. This dynamic development not only boosted labor income but contributed to further increases in entrepreneurial incomes and to increasing concentration of wealth in the Port-au-Prince area.

Incidence of Relative and Absolute Poverty

1.15 Interpersonal income distribution and relative poverty are discussed in some detail in the Bank's 1978 Economic Report on Haiti. The salient features are as follows: 3/

- (a) More than 60% of the population live in relative poverty, i.e., at one-third of the average per caput income or less.
- (b) Income distribution in rural areas is less unequal than in urban areas, with about 17% of the rural population having one-third or less of the average per caput income in rural areas. The corresponding figure for urban areas is 69% in provincial towns and 65% in Port-au-Prince.
- (c) The 5% of the population with the highest incomes capture more than 50% of national income; the average per caput income in the highest income bracket is 176 times that in the bottom bracket.

1.16 With an average per caput income of a little more than US\$200, it is not surprising that--with the exception of the Port-au-Prince metropolitan area--even more people live under conditions of absolute than relative poverty. It is estimated that, in 1976, the cost of minimum per caput consumption,

1/ See IBRD: Current Economic Position and Prospects of Haiti, 1976.

2/ These three sectors contributed 50.1% to economic growth from 1970 to 1976, although their combined share in 1970 GDP was only 22.1%.

3/ See Annex Tables 1.6 and 1.7 for the underlying data.

which would allow for the intake of a recommended minimum diet and for the acquisition of essential non-food items, amounts to about G 1,110 (US\$220) in Port-au-Prince and a low of about G 980 (US\$195) in rural areas (see Annex Tables 1.8 and 1.9).

1.17 Within these minimum expenditures, estimates of non-food items, which are based on the results of a 1970 survey, are assumed to be equal to expenditures on food. This may appear very high, although expenditures on rent and water may sometimes be very considerable. On the basis of an alternative assumption that non-food expenditures amount to only 40% of food expenditures throughout the country, total annual minimum expenditures amount to about US\$140 for the country as a whole, ranging from US\$164 in Port-au-Prince to US\$150 in the provincial towns and US\$135 in rural areas (see Annex Table 1.9).

1.18 The confrontation of these minimum consumption estimates with the actual purchasing power of the population as derived from the income distribution statistics shows that the overwhelming majority of Haiti's population, i.e., almost 90% (75%), 1/ live under conditions of absolute poverty and cannot afford what is considered the minimum standard of consumption of food and non-food items. The incidence of absolute poverty varies for the different parts of the country and ranges from about 60% (40%) in Port-au-Prince to over 83% (74%) in provincial towns and to 94% (78%) in rural areas (see Annex Table 1.9).

Nutrition

1.19 The recommended minimum per caput calorie intake for Haiti is of the order of 2,000 cal/day (see Annex Table 1.8). Since the cost of such a diet exceeds what most families can afford to spend for food, actual per caput food consumption must be lower, resulting in malnutrition and even starvation. A number of surveys carried out in the late sixties indicate, on an average, a daily per caput food consumption of about 1,700 calories. This consumption level does not only fall short of the recommended minimum of 2,000 calories but the underlying diet is also highly unbalanced with regard to its content of proteins and fats. Thus, many people are suffering from multiple nutritional deficiencies resulting in "underweight, poor muscular development, short stature, and a high total serum protein with relatively low serum albumin". 2/

1/ Percentages in parentheses are based on the lower estimates of expenditures for non-food items.

2/ U.S. Department of Health, Education and Welfare: *Syncrisis: The Dynamics of Health, IV: Haiti* (revised), 1976. Recent FAO data based on the apparent consumption during 1972/74 indicating a daily per caput intake of 2,028 calories, seem to overestimate the real situation. See FAO: *Monthly Bulletin of Agricultural Economics and Statistics*, April 1976. A new nationwide nutrition survey, commissioned by USAID, has started and results will become available late in 1978.

1.20 Malnutrition is particularly serious among children. According to the most recent survey (1974/75), only 13% of children were considered normally nourished (see Annex Table 1.10). About 31% showed first-degree, 38% second-degree and 17% third-degree malnutrition. 1/ Within the generally bad conditions, the northern half of the country tends to be worse off than the southern half and urban areas tend to be slightly worse off than rural areas. Compared to the results of a 1958 survey, which classified only about 21% of children aged 0-6 years as malnourished in the first and second degree, 2/ a marked deterioration of the nutritional situation has occurred. The malnutrition of children causes retardation that is irreversible even with excellent nutrition at later stages of development.

C. THE SPATIAL IMPACT OF GOVERNMENT - PAST TRENDS IN MAJOR POLICY AREAS

1.21 Public consumption and investment together accounted for some 11% of GDP in the late 1960s and 1970s. Measured in this way, the role of government in Haiti's economy may not appear very important. Since then, the Government has stepped up its public investment program with support from heavy external financing, and the public sector's share has increased to almost 16% of GDP in 1976. However, when trying to assess the spatial impact of government policies, two factors have to be taken into account. Firstly, the government's impact on the economy is not necessarily well measured by its share in aggregate demand since there may be highly effective regulations that could be administered by a small number of civil servants. Secondly, the absence of a well-defined policy or of expenditure in a particular field may also have an impact on the economy. Thus, we have tried to make a rough assessment of the spatial impact of both government action and inaction in specific fields.

The Fiscal System 3/

1.22 Some 35% of Government revenues and expenditures are not accounted for within normal budgetary procedures; both sources and purposes are unidentifiable. 4/ Consequently, it is impossible to assess the total impact of the fiscal system on the economy. The spatial incidence is here assessed with

1/ According to Gomez' classification based on weight/age relation. Normal = 90-110% of normal weight, first degree = 75-89% of normal weight, second degree = 60-74% of normal weight, third degree = less than 60% of normal weight.

2/ Jeliffe survey of 1958. Results given in US-HEW, op. cit.

3/ See also Technical Note on Estimating the Regional Incidence of the Fiscal System (tax revenues and fiscal expenditures) and of Planned Government Development Expenditure, accompanying Annex Tables 1.11 and 1.17.

4/ The government recently announced measures to reform the fiscal system, i.e. to establish a proper accounting system and to integrate all government revenues (incl. the parafiscal revenues of the Regie du Tabac) into the budget.

partial data for tax revenues and current fiscal expenditures, 1/ which in FY1975/76 represented some 60% of total current revenues and some 30% of total expenditures respectively.

1.23 Rough estimates of the spatial incidence of taxes 2/ shows that Port-au-Prince contributes about 47% to total tax revenues. Other urban areas together add about 12% and rural areas the remaining 41% (see Annex Table 1.11). The urban-rural distribution is in line with the distribution of national income (see Annex Table 1.7) but not necessarily with the regional ability to pay as reflected, for example, by per caput incomes in the different regions. The pattern is strongly influenced by the incidence of the coffee export tax that alone contributes about 17% to overall tax revenues. Within the urban sector, the distribution between Port-au-Prince and the other towns is 80:20 (as opposed to 66:34 for income) and may therefore more adequately reflect the respective ability to pay. The overall picture is, of course, shaped by the specific features of the tax system which relies heavily on indirect taxation and, therefore, tends to be regressive. A stronger emphasis on direct taxation of incomes and on import duties for luxury imports would result in a more equitable interpersonal and inter-regional tax incidence.

1.24 The estimate of the spatial incidence of fiscal expenditures is based on actual payments by financial districts. The only reasonable regional breakdown that this data allows is for Port-au-Prince and the rest of the country. On this basis, almost 83% of fiscal expenditures in FY1975/76 were effected in Port-au-Prince, only 17% in the rest of the country. These figures reflect the extreme centralization of Haiti's political and administrative system. The picture could be slightly different if we add recurrent expenditures of municipalities (net of government subsidies that are included in government fiscal expenditures) of G 3.1 million in FY1975/76. Furthermore, part of the services rendered and thus part of the salaries paid in Port-au-Prince, as well as part of the operating expenditures incurred in Port-au-Prince, have an impact on the rest of the country. A very rough estimate of the actual incidence of government expenditure, as opposed to the formal one given above, brings the figure for Port-au-Prince to a range of 50-55%. This, however, still means that the expenditure pattern is in favor of the capital.

1.25 In order to assess the spatial incidence of the fiscal system more fully, 3/ development expenditures, which amounted to about G 174 million in FY1975/76, should also be taken into account. An analysis of that year's development budget suggests that about 49% of these development expenditures

1/ Government development expenditures, which in FY1975/76 accounted for about 27% of total expenditures, are discussed separately below.

2/ The technical notes in the Annex, op. cit., for estimating procedures.

3/ Identifiable expenditures only.

directly or indirectly benefited the Port-au-Prince area, whereas 51% were channeled to the rest of the country. ^{1/} Considering both recurrent and development expenditures, the actual incidence on the Port-au-Prince area is estimated to amount to about 50%. Thus, the incidence of expenditures corresponds roughly to the incidence of tax revenues. The figures show, however, that so far the fiscal system has supported the dominating role of Port-au-Prince. The pattern of expenditures did not provide for any spatially redistributive effects, and the tax system is not designed according to personal or regional ability to pay.

1.26 The implementation of the 1976-1981 Development Plan is likely to result in considerable changes. Rough estimates show that the incidence of government expenditures on the Port-au-Prince area may well fall below the 40% mark. Furthermore, the implementation of the new income tax law (effective October 1, 1977) is likely to increase the relative importance of income tax within the whole tax system thus allowing also for a more equitable personal and regional incidence of revenues.

Agriculture

1.27 Until recently, the agricultural sector, which contributes about 45% to GDP and provides a livelihood for about 75% of the population, ranked very low among the Government's priorities. During 1973/75, only about 11% of development expenditures and about 9% of current budgetary expenditures were spent for agriculture. Moreover, given the rudimentary size of the extension service, with some 150-200 agents for the whole country, technical assistance on the farm level is virtually non-existent. Partly as a consequence of this neglect, agricultural production lacks dynamism and has grown at only 1.2% p.a. between 1954/56 and 1974/76, and the spatial impact becomes manifest in rural-urban migration of about 0.7% of the rural population per year.

1.28 Many agricultural experts in Haiti share the opinion that stagnation or even decline of coffee and cotton production results from a lack of price incentives to the producer. This may well apply also to other agricultural commodities. Unfortunately, there is no information on farm-level prices and the quantitative impact of the marketing and informal credit system. The only available information refers to retail market prices. An analysis shows that these prices, as compared to world market prices, tend to be high ^{2/} (see Annex Table 1.12) and that price increases over the last years kept pace with or even slightly outpaced general domestic price development (see Annex Table 1.13). However, this does not mean that these favorable price signals actually reached the producer. The agricultural marketing system is rather intricate. In some fields, the commercial sector seems to

^{1/} For the spatial pattern of development expenditures planned in the 1976-1981 period, see Section D.

^{2/} The comparison with world market prices depends, of course, on the current exchange rate that may constitute an additional problem.

be very powerful, exerting considerable influence on farm prices and managing to secure high profit margins. However, the Haitian smallholders cultivate a good deal of marginal land, have only insufficient knowledge of agricultural production techniques and virtually no access to improved seeds, institutional credit and technical assistance. Therefore, they have an extremely low productivity and unit production costs tend to be relatively high.

1.29 Government intervention in agriculture has been rather sporadic and dispersed and agricultural development has been essentially the result of very uneven market forces. During the past few years, Government efforts have been considerably increased but essentially on a project-by-project basis without any well defined sectoral policy and overall coordination. A major attempt towards orderly Government guidance in agricultural development has now been started with the establishment of COSEPA, (Comite Sectoriel de Politique Agricole) ^{1/} in September 1977. This committee, chaired by the Minister of Agriculture, comprises all agencies dealing with agricultural and rural development and is designed to define sectoral policies and coordinate policy actions in different fields and regions.

Industry

1.30 The manufacturing sector contributes about 13% of GDP and employs about 6% of the Haitian labor force. As the following table shows, the sector is highly concentrated in the western department, essentially Port-au-Prince, where also most of the developments during the past years have taken place. The modern industrial sector accounts only for a fraction of employment and is almost exclusively located in the Port-au-Prince area with only a few units, mainly in agricultural processing, established in provincial towns such as Cap Haitien, Gonaives and Les Cayes (see Chapter II).

Table I-2: INDUSTRIAL LABOR FORCE BY DEPARTEMENTS, HAITI 1950 AND 1971

<u>Departements</u>	<u>1950</u>		<u>1971</u>		<u>Increase 1950-1971</u>	
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
Ouest	31162	36.5	56362	46.8	25200	72.1
Nord	18397	21.5	17086	14.2	-1311	-3.7
Artibonite	11064	13.0	14911	12.4	3847	11.0
Sud	21062	24.7	25720	21.4	4658	13.3
Nord-Ouest	3676	4.3	6238	5.2	2562	7.3
Total	85361	100.0	120317	100.0	34956	100.0

Source: ILO: Problemes de Main-d'Oeuvre et d'Emploi, Haiti, Geneva, 1976.

^{1/} Sector Committee for Agricultural Policy.

1.31 Between 1971 and 1977, some 20,000 jobs have been created in the modern manufacturing sector, mostly in labor-intensive assembling activities in the Port-au-Prince area. This development was induced by low wage rates, the tax incentive legislation and external factors such as the proximity to the US market and the preferential US customs treatment.

1.32 There is no evidence as to the specific role of tax incentives in Haiti's industrial development. What is clear, however, from the existing laws and their application is that it is relatively easy to qualify for the privileges in the form of duty-free imports, tax exemptions (especially for income tax) and de-facto protection by excluding potential competitors from fiscal incentives.^{1/} Also, there are no formal requirements for increasing the contribution of these activities to the Haitian economy over time, e.g., through gradual increases in the number of qualified Haitian personnel and through other increases in local value added. Thus, in the longer term perspective, the impact of industrialization on the urban economy remains below its potential.

1.33 Both because of its relatively developed infrastructure and the centralization of the political and administrative structure, the Port-au-Prince area benefited most from the industrial development of recent years. In order to counteract these centripetal forces in industrial location, the new 1977 law gives additional tax incentives to firms that are established outside Port-au-Prince and its surroundings. It is very doubtful whether these additional incentives will have an effect on entrepreneurial behavior since they cannot compensate for the lack of infrastructure that constitutes a crucial problem in provincial towns, and its impact on the present value of a given project's cash flow is small if relevant at all.^{1/} Thus, probably without the desired locational effect, the law will contribute to further reducing tax revenues and will benefit industries, the location of which is less sensitive to spatially differentiated tax incentives than to other criteria, such as the availability of raw materials for agricultural processing.

Foreign Trade

1.34 Foreign trade policy virtually does not exist in Haiti as an important element of an integrated policy of socioeconomic development. There is no explicit policy of agricultural or industrial import substitution, nor is there an active policy of export promotion. Specific measures rather resemble ad hoc interventions that follow spontaneous transactions in the private sector as, for example, the new textile agreement with the US. The whole problem of foreign trade and domestic development is intimately linked to the foreign exchange policy that, by maintaining the free convertibility of the gourde at the present rate to the dollar for 50 years, has certainly favored commercial transactions rather than the development of domestic production. During the 1960s and 1970s, a differential of about 20% has developed between domestic and international prices for traded goods. At the same time,

^{1/} See Chapter II, Section B.

import duties have not been increased and imports have gained a competitive edge over domestic products. The absence of an import-substitution policy in general and of regulations to increase the local content of manufactured products in particular have negative effects on agricultural and thus on the whole rural economy. Cotton is a prominent example where national production has gradually been sacrificed and where the local textile industry has access to imports without any obligation to organize and improve local cotton production.

1.35 So far, foreign trade has been mainly the object of fiscal considerations. In FY1975/76, foreign trade generated G 196 million in fiscal revenues, i.e. G 105 million (53.6%) in import duties and G 91 million (46.4%) in export taxes, of which about G 53 million came from coffee exports. The relative tax burden is 10% on merchandise exports and only 9% on merchandise imports. Because of the high share of coffee export taxes, the taxation of total foreign trade tends to discriminate against rural areas. The incidence of total customs revenues on rural areas is estimated at 57% in 1976, whereas the share of rural areas in national income is only about 42% (see Annex Tables 1.7 and 1.11). Urban areas, especially Port-au-Prince, where the bulk of merchandise imports goes, are privileged by the present system.

Credit

1.36 Credit to the private sector is available from the commercial banks established in Haiti and from the Government-controlled Institut de Developpement Agricole et Industriel (IDAI). Another public institution, the Bureau de Credit Agricole (BCA) is catering to agriculture. Commercial banks are primarily involved in short-term commercial credit, mostly foreign-trade related, which can be revolved to maximum maturities of two to three years for certain customers. IDAI is the only source of medium- and long-term credit. 1/ Total credit to the private sector stood at G 633 million as of March 31, 1977, of which about G 177 million came from the monetary authorities, G 425 million from commercial banks and only G 31 million from IDAI; hence the limited impact of this development bank. 2/

1.37 Activities of commercial banks are mostly concentrated in the Port-au-Prince area. IDAI, with its rudimentary system of branch offices, is active in two major areas, i.e., the Departement de l'Ouest, mainly Port-au-Prince, and the Departement de l'Artibonite (see Annex Table 1.14). The bulk of IDAI's portfolio consists of long-term loans for the industrial sector, mainly in the Port-au-Prince area, with maximum maturities of 10 years. Agriculture, which in recent years hardly accounted for 10% of the credit volume, or less than 0.5% of total private sector credit, is mainly provided with short-term funds. Thus, development financing is biased towards the industrial sector and urban areas. Loan conditions do not reflect any sectoral or regional priorities and the interest rate, at present 12% p.a., is applicable irrespective of the maturity, the sector or the location of the activity. Thus, IDAI credit is also an element in the centripetal socioeconomic forces.

1/ BCA's long-term credit is insignificant.

2/ See IMF: Haiti - Recent Economic Developments, July 1977.

Education

1.38 Education has long been a neglected area. In 1976, only 1% of GDP or 13% of government current budgetary expenditures were devoted to public education which, when compared with other countries, is extremely low. ^{1/} The education system has mainly catered to a small urban elite and the vast majority of children and adults, especially in rural areas, has been excluded. Annex Table 1.15 clearly shows the urban bias of the system. The most neglected area seems to be the rural section of the old Departement du Sud. Enrollment in primary education amounts to 41% of school-age population in rural areas and to 176% ^{2/} in urban areas. The urban-rural differential is, however, worse in terms of completion. Only 2% of children in rural areas complete primary education versus 27% in urban areas. The Bank's First and Second Education projects in Haiti are first steps towards correcting this bias in educational investments.

1.39 Curricula and syllabi in primary education, which are designed to prepare for a certificate at the end of the 6th grade, appear mostly irrelevant to the country's socioeconomic development and inappropriate to the learning capacity of children. These general features combined with the extremely high drop-out rates make the education expenditure in rural areas almost a complete loss. Most rural children receive largely irrelevant education for an extremely short time in a language (French, the official language) which they do not understand. Thus, education has so far not been a positive factor in rural development and, as discussed in Section A above, the lack of adequate facilities in rural areas contributes to fueling the rural-urban migration process.

Administrative Structure

1.40 It is clear from the preceding discussions that Government policies and services cater mostly to urban sector activities at the expense of rural areas. Moreover, the administrative system is highly centralized without leaving any significant administrative and financial autonomy to the departmental or municipal level (see Chapter IV), and it exerts strong centripetal forces within the urban sector. This centralized structure not only contributes to draining talent and resources from provincial towns but also to shaping the spatial pattern of urban economic activities. All relevant Government decisions related to private sector investment are taken on the central level and a private investor must have very specific reasons to locate outside Port-au-Prince where infrastructural facilities also tend to be worse. In order to be successful, any attempt at decentralization of economic activities will have to rely more on local initiatives and, therefore, will have to be accompanied by some devolution of political and administrative power.

^{1/} Public education expenditures are typically near 4% of GDP and 21% of current budget expenditures, like for example in Senegal, Mauritania, El Salvador and Honduras.

^{2/} Percentage exceeding 100% due to enrollment of overaged children and children from rural areas.

D. REGIONAL DECENTRALIZATION IN THE SECOND PLAN PERIOD

1.41 The second Five-Year Development Plan covering 1976-1981 defines four major priority areas, i.e, agriculture, decentralization of industrial infrastructure, education and strengthening of the institutional structure. The pursuit of the first two priorities, in particular, could have a considerable impact on the spatial structure of the country by counteracting the previously noted neglect of the rural sector and the stagnation in provincial towns.

Spatial Development Strategy

1.42 The Plan broadly defines a spatial development strategy 1/ which relies on the decentralization of non-agricultural activities and rural development. The decentralization process is shaped along the growth-pole and related theories and assigns specific functions to communities on different hierarchical levels. Conceptually, this is the usual approach to a rational distribution of economic activities and infrastructural facilities over a given territory. However, the approach outlined in the Plan requires more concrete and clearer definitions of goals, objectives and regional priorities and of specific policy measures. This presupposes more complete information and a better understanding than is now available of the regional development problems in general and of urban and rural poverty in particular. The identification of specific problems as to their intensity and spatial incidence could then be used to define operational objectives and establish priorities for their pursuit in different sectors and regions over time.

1.43 Given the early stage of physical planning or any explicit spatial development efforts in Haiti and this lack of specific information, the spatial development strategy outlined in the Plan falls short of comprehensive regional development programs or an explicit regionalization of sectoral investment programs. Decentralization is pursued only to the extent that more emphasis is given to agricultural and rural development and to non-agricultural development outside Port-au-Prince, in particular for infrastructure.

1.44 The 1976-1981 Plan includes a public investment program 2/ of about US\$615 million at 1976 prices. This very ambitious program would represent a dramatic jump in public and total investment, relying heavily

1/ See CONADEP (Conseil National de Developpement et de Planification) Plan Quinquennal 1976-1981, October 1976 (Vol. I, Chapter 3). There is also a more detailed background paper by CONADEP: Regionalisation et Strategie de Developpement Regional, June 1976.

2/ See also Technical Note on Estimating the Regional Incidence of the Fiscal System, etc., op. cit.

on external financing. Although actual implementation has fallen short of the Plan targets, the new development thrust is noticeable and public investment already increased from FY1974/75 to FY1975/76 by about 35% in real terms.

1.45 The sectoral priorities mentioned above are clearly reflected in the 1976-1981 public investment program, particularly in the fields of agriculture, education, health and water supply. This is evident from Annex Table 1.16 which compares the pattern of development expenditures during 1972 to 1975 with that of the 1977/78 development budget and with the program for the first years of the 1976-1981 period, as approved by the Government and financially supported by external agencies.

1.46 Marked changes have also taken place with regard to the regional orientation of government development expenditures. Whereas a rough estimate of expenditure in FY1975/76 points to an incidence on the Port-au-Prince area of about 49%, an analysis of the 1976-1981 program on the basis of projects approved as of December 1977 or to be approved within the next few months shows that the share of Port-au-Prince may decrease to about 28% (see Annex Table 1.17). The incidence of development expenditures on provincial towns is estimated at about 18% and that on rural areas at about 54%. Table I-3 shows that with this pattern, government development expenditures, if compared to the distribution of population, will still be concentrated in the Port-au-Prince area and in the provincial towns. However, when the incidence of development expenditures is compared to the spatial distribution of national income, it becomes clear that significant decentralization will take place. The pursuit of the present public investment program is thus likely to lead to a gradual change of the spatial structure of Haiti's socioeconomic system, a process which may be reinforced by a gradual reorientation also of private investment. The change will be slow since current investment represents only a fraction of the capital stock with its given spatial distribution.

Table I-3: SPATIAL DISTRIBUTION OF PUBLIC INVESTMENT,
POPULATION AND NATIONAL INCOME-PERCENTAGES

	Spatial Incidence of 1976-1981 Investment Program	Spatial Distribution of	
		Population 1976	National Income 1976
Urban areas	46.1	23.1	58.5
Metropol. Port-au-Prince	28.2	14.0	39.3
Other Towns	17.9	9.1	19.2
Rural areas	53.9	76.9	41.5
Total	100.0	100.0	100.0

Source: See Annex Tables 1.7 and 1.17; population from IHS.

1.47 In the spatial incidence of planned development expenditures, the Northern Department ranks second in importance after the Port-au-Prince metropolitan area (see Annex Table 1.17). Including part of the expenditures

that are not spatially specified, the North's share corresponds to about its share in population. Within the department, a certain concentration of the investment efforts in the urban areas is in line with government's growth-pole strategy intending to upgrade Cap Hatien as the second most important town of the country. A similar concentration applies to the Artibonite Department, where the urban centers are Gonaives and St. Marc. The development program in rural areas is strongly biased in favor of the northern and northwestern departments.

1.48 The development program as a whole also tends to favor the northern part of the country over the southern part. The northern departments 1/ have 48% of the population living in the country outside of Port-au-Prince but will benefit from 60% of total development expenditures outside the metropolitan area. The corresponding figures for the southern part are 40% of expenditures for 52% of the population. This particular spatial distribution of development efforts may be justifiable on grounds of relative development potential, and will contribute to gradually changing the country's spatial development. However, the southern peninsula is the main origin of rural-urban migration and the impact of regional development expenditures may not significantly alter the trends in internal migration.

E. SUMMARY AND CONCLUSIONS

1.49 In the 1970s, Haiti's population has grown at around 1.8% per annum as a result of relatively low natural growth rates of 2.2% per annum and substantial emigration averaging 0.4% per annum. With rural population growth at just over 1%, the urban population has increased by more than 4% and now accounts for about 23% of the total. 60% of the urban population is located in Port-au-Prince and the metropolitan area is growing between 5% and 6% so that its weight in the urban sector continues to increase.

1.50 Rural-urban migration is mainly fueled by better work and income opportunities and by better educational facilities in urban centers and in particular in Port-au-Prince. It is also facilitated by the continued importance of the extended family in Haiti. Any effort to decentralize economic developments away from Port-au-Prince will have to address these differentials in economic and educational opportunity as well as access to other public services; if the policy is to have an impact on rural-urban migration.

1.51 Haiti is the poorest country in the Americas and among the 30 poorest in the world with a GDP per caput of little more than \$200 in 1976. Overall, the rural areas average only half that per caput income level with Port-au-Prince averaging 3.5 times the average for the country. The concentration of higher income in Port-au-Prince is due to the near-monopoly

1/ Nord, Nord-Est, Nord-Ouest, Artibonite, Centre.

of the capital in industry, commerce and construction activities. For example, over 90% of industrial employment is located in the metropolitan area. If anything, the weight of Port-au-Prince has increased in recent years.

1.52 Interpersonal income distribution is also very unequal. More than 60% of the population live on US\$60 per annum or less, i.e., at a level of 32% or less of the average per caput income in the country (1976 data-straight conversion into US\$). The top 5% of the population attract more than half of national income. Income distribution in rural areas is somewhat less unequal, with only 17% living at or below about one-third of average income in rural areas. The same figure for relative poverty is 69% in provincial towns and 65% in Port-au-Prince.

1.53 With such low per caput income levels, it is not surprising that more people live in absolute poverty than in relative poverty. Depending on the amount judged essential for minimum expenditure for non-food items, some 75% to 90% of Haiti's population live under absolute poverty. This means that up to 60% of the population in Port-au-Prince, 83% in provincial towns and 94% in rural areas cannot afford what is considered minimum standards of food and non-food consumption. This is supported by the latest nutrition survey carried out in 1974/75, which showed that only about 13% of children are normally nourished, the rest suffering from varying degrees of malnutrition. This survey shows a significant deterioration from the previous survey carried out in 1958.

1.54 Public consumption and investment averaged some 11% of GDP in the late 1960's and early 1970's and rose to 16% in 1976. Some 35% of government revenues and expenditures are unidentifiable within normal budgetary procedures and it is not possible to assess the total impact of the fiscal system on the economy. From partial evidence, however, it can be stated that government expenditure patterns follow the tax incidence to some extent but have no regional redistribution effects and have heavily favored Port-au-Prince in the past. The tax system does not take into account regional ability to pay as shown by regional income distribution, and revenues are heavily dependent on regressive indirect taxes. The Second Five-Year Development Plan (1976-1981) will reduce the expenditure concentration in Port-au-Prince to below 40%, which, however, is still above the share of the metropolitan area in total population. Recent measures will also slightly increase the reliance of public revenues on income taxes.

1.55 In the past, the regional incidence of major policy areas has been at best minor but mostly negative in terms of decentralized development. Agriculture, which provides a living for about 75% of the population and contributes some 40% of GDP, has attracted only 11% of development expenditure and 9% of current budget expenditure in the past. In line with the government's decentralization objective, the share of agriculture is to rise to about 22% of development expenditure in the current plan. Incentives to locate outside of the dominant Port-au-Prince area have recently also been established for industry, which remains, however, a fairly minor sector contributing only some 13% to GDP and employing about 6% of the labor force. Their actual impact on shifting industrial investments to the provinces remains doubtful and is likely to be minor.

1.56 In other policy areas, there is either an absence of a coherent policy, as in foreign trade, or a heavy concentration on the Port-au-Prince area. The latter is particularly obvious in the provision of industrial credit, the provision of educational facilities and in the centralization of the administrative structure. Decentralization of the administrative structure to the provinces is just beginning.

1.57 In addition to putting heavier emphasis on agricultural development, the current Five-Year Plan also includes decentralization of industrial infrastructure away from Port-au-Prince. However, the Plan falls short of a comprehensive regional growth pole strategy and the basic data base for such a policy remains inadequate. While implementation of Plan objectives falls short of the targets, dramatic increases in investments are taking place with heavy foreign assistance and, over the period 1976 to 1981, only 28% of development expenditure is to be made in the Port-au-Prince area, a substantial fall from 49% in 1975/76.

1.58 The northern part of the country is the main beneficiary of this shift away from Port-au-Prince to the regions and it is the area which is judged to have the best immediate development potential. If realized, this shift in the spatial distribution of development expenditure will gradually move the country towards more decentralized development, but it may not significantly alter the trends of internal rural-urban migration. The main origin of such migration is in effect the south, whose allocation of development expenditure will remain below its share in total population.

CHAPTER II: URBAN EMPLOYMENT

Introduction

2.01 Starting with an overview of the employment problem in the country, this chapter will examine the role of industry, handicrafts, construction and the informal sector in providing non-agricultural income earning opportunities for the urban labor force. Less than a quarter of the labor force now resides in urban areas but all of the nation's labor force growth will be concentrated in the urban sector.

2.02 Only a fraction of this increase can be absorbed by manufacturing, handicrafts and construction. The bulk will have to make a living in the informal sector, which now accounts for around two-thirds of urban employment. Throughout the Chapter, the statistical base for analysis is extremely weak. This is most serious for informal activities, which cut across the traditional national accounts statistics on manufacturing and crafts, construction, trade and commerce and other services. Furthermore, linkages between informal and modern activities such as industrial manufacturing, remain ill-defined and public policy has not yet focussed on support to the informal sector. And yet, its importance is such that there is little hope to relieve the grave urban poverty picture unless output in this sector becomes a dynamic force in the economy.

A. OVERVIEW OF EMPLOYMENT AND UNEMPLOYMENT

2.03 The concepts of employment and unemployment do not apply easily to Haiti. The country is so poor that very few people can really afford to be unemployed and many activities, especially those performed by children, hardly qualify for the traditional definition of employment. Thus, labor force and employment data is difficult to interpret.

2.04 According to the 1971 census, total population amounted to 4.33 million. Population of working age (defined as those aged 10 and over) amounted to 3.13 million of which 2.27 million were considered economically active, with 1.95 million or 85.8% employed and 323,000 or 14.2% openly unemployed (see Table II-1). In addition to open unemployment, underemployment is heavy, particularly in agriculture and in the informal sector. Rough estimates of disguised unemployment in the agricultural sector range as high as 40-55%. ^{1/} No similar estimate exists for the informal sector.

^{1/} See ILO: Problemes de Main-d'Ouvre et d'Emploi - Haiti, op. cit.

Table II-1: POPULATION AND LABOR FORCE, HAITI 1971

	<u>'000 Persons</u>	<u>Percentages</u>	
Total population	4,330.0	100.0	
Population aged 10 and over	3,131.7	72.3	
Labor force			
(economically act. pop.)	2,271.8	52.5	100.0
Employed	1,948.8		85.8
Family aides	655.2		28.8
Others	1,293.6		57.0
Unemployed	323.0		14.2

Source: IHS, ILO; based on census information.

2.05 Although employment in agriculture shrank slightly from 1950 to 1971, this sector still offers the bulk, i.e., 73.5%, of all jobs (see Table II-2). During the same period, employment in non-agricultural activities more than doubled from 245,000 to 515,000 in 1971. Most of this additional employment accrued in the informal sector and only a small proportion in modern sector activities. Despite further increases in the manufacturing employment in Port-au-Prince in the 1970s, by 1975, the informal sector accounted for about 60% of employment in Port-au-Prince.

2.06 Total labor force is estimated to increase at an annual rate of 0.8% during the next ten years. ^{1/} Because of migration and changes in the age structure, the labor force is expected to shrink slightly in rural areas, but will increase strongly in urban areas, i.e., by about 4% p.a. (see Annex Table 5:3). This expected rise will aggravate the precarious situation in urban labor markets and adds further urgency to the creation of employment opportunities in the non-agricultural sectors.

¹ Overall growth of the labor force is lower than population growth for three main reasons: (a) participation rates in urban areas are traditionally lower than in rural areas and population growth will be concentrated in the urban areas; (b) better educational opportunity will reduce labor force participation of the young; (c) a disproportionate share of emigrants are of working age.

Table II-2: EMPLOYMENT BY SECTORS, HAITI 1950 and 1971

<u>Sector</u>	<u>Persons employed</u>			
	<u>1950</u>		<u>1971</u>	
	<u>'000</u>	<u>%</u>	<u>'000</u>	<u>%</u>
Agriculture	1,453.9	85.6	1,433.2	73.5
Mining, quarrying	0.5	0.0	1.0	0.0
Manufacturing industries	85.4	5.0	120.3	6.2
Construction	10.3	0.6	17.9	0.9
Electricity, water	1.0	0.1	1.4	0.1
Transport, communication	6.5	0.4	11.9	0.6
Commerce			194.8	10.0
Banking, insurance	61.6	3.6	2.4	0.1
Services (including Government)	80.4	0.7	160.9	8.3
Statistical discrepancy	-	-	5.0	0.3
Total	<u>1,699.6</u>	<u>100.0</u>	<u>1,948.8</u>	<u>100.0</u>

Source: Problemes de Main-d'Oeuvre et d'Emploi, Haiti, op. cit.

B. MANUFACTURING INDUSTRY

Past Trends

2.07 Industrial development is not one of the major priorities in the development plan and the sector is still of relatively minor overall importance in the country, although of increasing consequence in the capital. After stagnating for a decade and a half, industrial production picked up at the beginning of the 1970s, fueled by the installation of export assembly industries, mostly in the Port-au-Prince area. By 1976/77, manufacturing accounted for some 13% of GDP. This figure is understated because national accounts coverage is based on the industrial structure of the mid-1950's with inadequate adjustment for changes since then, so that some of the new activities, such as the steel plant and some export processing activities go unrecorded. Industry's contribution to GDP remains well below that in other Latin American countries. The gap is striking in terms of industrial product per caput, which in 1976 (at 1976 price levels and foreign exchange rates) amounted to about US\$13 per head in Haiti compared to US\$20 in Bolivia, the next highest in Latin America and nearly US\$72 in the neighboring Dominican Republic.

2.08 In the absence of an industrial census, 1/ the only consistent nationwide data are those collected by the National Insurance Office (Office d'Assurance - Accidents du Travail, Maladie et Maternité-OFATMA), given in Annex Table 2.1 for 1975/76. The table shows 1,000 industrial enterprises for the nation, although only about 480 can be said to be "industrial" while the remainder are more in the nature of craft-type workshops. Total employment at close to 18,000 people and the wage bill at about G 59 million (US\$11.8 million) are likely to be understated by 20 to 30%, due to seasonal labor fluctuations, prolonged employment of temporary and part-time workers and widespread use of out-workers, all of which are not covered by insurance legislation. There may also be some deliberate under-reporting. Even with a 30% adjustment for this under-recording, OFATMA data are still below those from other sources. A 1975 estimate, made in the framework of the PPHC 2/, puts employment in the modern manufacturing sector in the Port-au-Prince area alone at some 28,000 people (see Annex Table 2.2). This is still only about 10% of the metropolitan area labor force.

2.09 Consumer goods industries catering to the local market, building materials production and export processing industries, also mostly consumer goods, dominate the sector. It is the latter that have accounted for most of the recent industrial growth. Since 1971, they have created an estimated 18,000 jobs compared to only about 2,000 new jobs created in industries working for the local market. They export all of their production, almost exclusively to North America, and most of their raw materials come from there. Duty-free import status into the United States depends on purchasing US material inputs. Linkages to the local economy are thus kept fairly low, although these industries have stimulated some ancillary developments, mostly in transport and catering.

Spatial Pattern

2.10 Annex Table 2.1 illustrates the overwhelming weight of Port-au-Prince in manufacturing. The metropolitan area accounts for 67% of all enterprises, more than 92% of all recorded employment and about 94% of the recorded wage bill. The second largest town, Cap-Haïtien, has 10% of the enterprises but only 3% of the employment and between 2 and 3% of the wage bill. This preponderance of Port-au-Prince is not likely to diminish rapidly.

1/ A UNIDO Industrial Survey Mission started work at the end October 1978 and is expected to be in the field for up to three months. According to the terms of reference, the mission will establish an inventory of existing industrial activities as well as of the human and natural resources and the whole system of industrial infrastructure. Furthermore, it should assess the medium-term prospects for industrial development, identify new industries and produce recommendations for medium-term developments. USAID is also engaged in a Small Business Survey.

2/ Planification Physique, Habitation et Construction, joint project of the government of Haiti and the UN, No. HAI/SD 0970.

Export processing industries will continue for the time being to prefer Port-au-Prince as a location. All sea-borne international trade has to go through Port-au-Prince and the capital also has the only airport capable of handling large cargo planes. Even after the rehabilitation of the Cap Haitien airport, with French bilateral assistance, that airport will still not be able to handle anything larger than a DC-6. Provincial locations thus mean higher transport costs for inputs and outputs in addition to the increased costs of keeping in touch with the centralized government machinery in Port-au-Prince.

2.11 Also, industrial infrastructure is generally more deficient and sometimes more costly in the provincial towns than in Port-au-Prince. This applies to transport infrastructure, water, power, 1/ and telecommunications. Remedial actions are getting under way on many of these problems 2/ but will take many years to complete. In the meantime, the only industrial zone operation in the country is in Port-au-Prince and is being expanded with IDB finance, while plans for the development of an industrial estate in Cap Haitien are in abeyance.

Industrial Policy

2.12 Industrial policy is not developed and is presently limited to the enunciation of three lines along which development should be pursued in the coming years, i.e.:

- (a) an increase in exports,
- (b) a progressive replacement of export assembly industries by activities based on national resources; and
- (c) decentralization of industrial development towards the provinces.

With the exception of the building materials subsector, most of the more obvious import substitution possibilities are already realized or are blocked by vested commercial interests and the Government's trade and foreign exchange policies (see Chapter I).

2.13 The major specific policy measures in force are the industrial incentive law and the minimum wage regulations. The industrial incentive law was passed in 1960 and subsequently amended in 1963, 1969 and 1977.

1/ The application of a national electricity tariff in 1977 has removed the previous discrimination of electricity rates in favor of Port-au-Prince, which was a deterrent to decentralization. The problem of inadequate and unreliable power supplies remains.

2/ Further major road investments, including the upgrading of the secondary road system are under preparation and the World Bank will support improvements of the coastal shipping system. The Bank and the UN will upgrade water supply and distribution in 10 provincial towns and some bilateral donors are planning to improve provincial power supply.

The key provisions refer to new industries for export or new products for the domestic market. They are:

- (a) duty-free imports of machinery and equipment;
- (b) duty-free imports of raw materials and components for re-export;
- (c) five-year total income tax exemption, progressively reduced over a further five-year period, for factories in the Port-au-Prince metropolitan area;
- (d) fifteen-year total income tax exemption plus the same five-year tapering-off period for factories outside of the Port-au-Prince area; and
- (e) some protection from competition for new products for the domestic market and some differentiation between priority industries in the Development Plan and others.

2.14 The legislation does not ask entrepreneurs to increase local value added over time through such actions as enlarging the use of local raw materials, widening the scope of the transformation process carried out in Haiti with imported raw materials or components and encouraging the employment of Haitians in responsible positions. Some scope for increasing local value added should exist and, if exploited, would increase the impact of industrial development on the local economy beyond the present very low level. The impact of the legislation on industrial decentralization must also be considered minor. Entrepreneurs in Haiti are accustomed to pay-back periods of three to five years and, for a 25-year investment and rates of return (or discount) of 33%, the added incentive for provincial locations only produces a 7% higher present value of the income stream after taxes.

2.15 Minimum wages were raised in September 1977 from US\$1.30 to between US\$1.60 and US\$2.00 per 8-hour day. ^{1/} Industry-specific rates are assigned at levels within this range. The minimum wages apply to unskilled workers. Skilled workers, at least in the larger enterprises, earn wages up to a third above the minimum, while trainees earn less. The legislation does not give any wage preference for enterprises locating outside of Port-au-Prince, although this could be justified by differences in the cost of living. The best that can be said for this legislation is that its enforcement is far from general and, where it is enforced, it increases to some extent the local impact of export assembly operations.

2.16 Finally, some further efforts are getting under way in industrial promotion. In mid-1977, an Industrial Promotion Office ^{2/} was created with assistance from the Federal Republic of Germany (see Chapter IV for details).

^{1/} Decree of September 15, 1977.

^{2/} Bureau Haitien de Promotion Industrielle - BHPI.

The Office has already started with concrete projects for rehabilitation of existing enterprises and the creation of new ones and is providing a link to potential German investors. It has set itself a target of creating some 2,800 to 3,500 jobs in manufacturing over the next five years, in addition to job creation in civil works and in crafts. A parallel promotional effort is expected to be mounted with UNIDO assistance in the Ministry of Industry and Commerce and UNIDO will also organize the training of industrial promotion officers in New York with the objective of placing such officers later into Haitian embassies abroad.

Prospects

2.17 Given the limited agricultural potential of the country, industry retains considerable long-term importance. However, given its small size, manufacturing cannot be expected to provide a major part of the needed non-agricultural employment creation in the near future. Many of the existing export processing enterprises are subsidiaries of US companies and many others depend on contracts to supply a given US Company. Thus, their prospects largely depend on the political relationship with the U.S., on the development of the North American economy or on the fate of a given U.S. customer. European companies are just beginning to show an interest in investments in Haiti, and this might lead to a desirable diversification of markets and should be encouraged. Overall, prospects for such industries will remain relatively favorable as long as the conditions that attract them remain in place. These are an abundant supply of cheap, unskilled but dexterous and relatively unmilitant labor, the absence of foreign exchange controls, little government interference, proximity to the US market and favorable incentives. Many of these enterprises have plans for expansion in the next two years and the further extensions of the industrial zone in Port-au-Prince are largely based on specific demand for the new facilities.

2.18 There are also good prospects for the further development of building material industries. Building activity has been growing at some 6% per annum recently. Building and other construction demand should continue to be strong and might accelerate if adequate mechanisms for housing finance are put in place (see Chapter III). Considerable potential for clay-based products such as bricks, tiles and sanitary equipment can still be exploited. However, the prospects for industries based on other national resources remain clouded. Known mineral resources other than building materials are few. Exploitation of bauxite ores has fallen in recent years and a small copper mine has ceased operations. Other known significant deposits are limited to a recently discovered copper ore body of commercial size near Douvray and the well known brown coal deposits. Exploitation of both is under study. If the copper mine, which is suitable for open-cast exploitation, proves a viable proposition, it might provide some 1,000 to 2,000 jobs but not before the mid-1980s. Use of the brown coal deposits, which depends on the construction of an all-weather road, could help in alleviating the heavy dependence of the power sector on imported oil. Mineral exploration through INAREM (Institut National de Ressources Minerales) the Minerals Resources Institute, continues.

2.19 Further development of agro-based industries, whether directed at the narrow local market or at exports, is conditional on a successful agricultural development effort. The regional agricultural projects now underway could strengthen both the supply of raw materials and the basis for an expansion in the industry supplying simple agricultural implements. At present, however, production of some major agricultural products such as coffee, sugar cane and cotton is stagnating or falling in quantity and quality. The artisanal fishing industry does not satisfy even the low level of domestic demand, and no fish processing is done. ^{1/} Wood resources are declining and will not pick up until reforestation pays off. The only immediate hope for agricultural processing development exists in fruit juice processing in relation with the essential oils industry and in vegetable canning. Citrus fruits are presently processed only for essential oils and the juice is discarded. Some juice processing and vegetable canning plants are now in various stages of preparation and start-up. There is scope for further extending the development of integrated projects which combine the production of raw materials and their processing to break through the reluctance of farmers to grow the produce without an assured outlet and the reluctance of industrialists to invest in a plant without assured raw materials supply. The experience in agriculture and industry of the IDAI (Institut de Developpement Agricole et Industriel), could be put to use in this area, on condition that the institution is reorganized and strengthened.

2.20 There is also need for modernization and quality control. The equipment in small sugar processing plants, the essential oil industry, clairin production (the local alcohol) and cotton spinning and weaving is largely obsolete. Quality control is a problem for export development in the essential oil industry but also in other manufacturing activities. Sugar cane processors will be supported through IDAI with IDB finance and USAID is interested in supporting agro-industries that use raw materials produced by small farmers through the possible creation of a private DFC for which a feasibility study was recently completed by ADELA/TEC. The recent IDB loan to IDAI also includes support to a quality control laboratory.

2.21 No discussion, however brief, of industrial development in Haiti is complete without emphasizing the major constraint of skilled manpower shortages. Shortages exist at all skill levels. Some return migration of expatriate Haitians provides only a very partial counterweight against continued emigration of skilled professionals. Shortages are particularly acute in high level technical staff, which now commands a salary premium of some 60 to 70% over management professionals. But skilled workers are also in short supply. A multitude of technical and vocational training schools operate in the country (see Chapter IV), but they do so in a largely uncoordinated manner, with insufficient training materials and equipment and, above all, mostly without reference to the needs of industry. As a result, only about 5% of "skilled" workers are estimated to have acceptable proficiency levels, and many industrialists are obliged to conduct their own in-house training. The recently created National Training Institute (Institut National de la Formation Professionnelle - INFP) has not yet assumed its coordinating

^{1/} IDB is planning to initiate a major survey of fishing potential for the country.

functions. However, it has started a major survey of employment and skill structures and requirements with ILO assistance and the involvement of IHS, ^{1/} and this should provide the basis for the rationalization of the training efforts and the formulation of a comprehensive training policy.

2.22 Estimating the likely volume of employment creation in modern industry in the coming years faces the difficulties that export processing industries depend more on what happens in the U.S. economy than on any other factor, that agro-based industries depend on the development of agriculture, which is notoriously difficult to forecast, that there is little or no knowledge of the expansion plans of the existing industrial establishments and that, for a number of projects under discussion, expected employment data are not yet available. Any estimate is, therefore, little more than guesswork. On that rough basis, modern industry may create some 12,000 additional jobs between 1977 and 1981, or some 3,000 per annum. This amounts to some 12-13% of the expected increase in the urban labor force over the same period.

C. HANDICRAFTS

2.23 If statistics on modern manufacturing industries are deficient, those on the Haitian craft sector are practically non-existent. The sector is an integral part of the economy and is of considerable importance in the rural as well as urban areas but has remained at the margin of statistical work and studies. This may be partly explained by the past dispersal of official responsibilities for the craft sector among four different ministries. ^{2/} The recently created National Crafts Council (Conseil National d'Artisanat) and the attached National Crafts Office ^{3/} (Office National d'Artisanat) have not yet become fully operational and their impact will depend on the financial and staff resources that will be put at their disposal (see Chapter IV).

2.24 There is no agreed definition of the handicraft sector in Haiti. The decree creating the National Crafts Office defines handicrafts as products basically produced by individual manual work. Articles of this type produced in Haiti include braided vegetable fiber (hats, baskets, mats, rugs, etc.), ceramics, hand-embroidered textiles and wool and cotton weaving and crocheting, wood working for kitchen utensils, statuettes and some furniture, metal working to produce household goods, small implements and some furniture, stone cutting and shell and bone work. A survey made in 1975 in Port-au-Prince showed that some 2,000 people were employed in craft production in the metropolitan area

^{1/} Project HAI/74/014: Planification des Ressources Humaines et de l'Emploi.

^{2/} The Ministries of Commerce and Industry, Social Affairs, Education and of Agriculture, Natural Resources and Rural Development.

^{3/} Decree of September 12, 1977. The office was formally set up in August 1978 and a request for budgetary funds has been submitted to the Ministry of Finance.

(see Annex Table 2.2). This figure, however, does not include large scale crafts production. For example, an ILO report ^{1/} estimates that over 2,500 women produce crocheted and embroidered garments for exports to the US and some 700 people are involved in the production of teddy bears. Woodcarving, mostly done in Port-au-Prince workshops, also employs a sizable number of people, and it is not clear how far these have been accounted for in the 1975 survey. Also, sizable numbers of people are involved in selling crafts products. About 1,000 licensed sellers are active in Port-au-Prince alone and large numbers of sellers are not licensed.

2.25 While comprehensive statistics are lacking, crafts production is clearly of considerable importance. Direct sales abroad and sales to foreign tourists are estimated to have totalled about US\$10 million per annum in 1975 and 1976. ^{2/} Substantial production also takes place for local consumption and most of the raw materials are of local origin. Over 80% of sales go to the United States but they represent only 2 to 3% of such United States imports. The other main clients are the surrounding Caribbean islands, where Haitian products known for their quality, variety and sometimes distinctive style, supply much of the "typical" souvenirs sold there. Smaller quantities are also beginning to go to Europe and Canada.

2.26 Further market potential for expanding Haitian craft exports should clearly exist. Despite competing products from other developing countries, Haiti's market share in North America could no doubt still be expanded and its products are just beginning to become known in Europe. Expansion of craft production, however, will have to overcome certain obstacles. Crafts training is in the same confused and unsatisfactory state as that for industrial skills. Raw material supplies are unreliable in quantity and quality. Some are subject to international price fluctuations such as sisal, which creates problems for small workshops that do not have the finance to keep stocks. Others, such as hardwood, are in short and declining supply and can be imported only with difficulty. Lack of finance also prevents the keeping of stocks of finished products by the crafts producers, who often have to request advance payments before they can undertake to fill an order. This creates problems with large export orders, although some of the 35 to 40 craft export houses in Port-au-Prince accumulate stocks and prefinance craftsmen.

2.27 While crafts training, the organization of raw materials and credit availability to crafts producers will require attention, the major field in which government might usefully intervene is the organization of steady flows of information about Haitian products to clients abroad and the reverse flow of information about design and fashion trends abroad to Haitian producers. The primary importance of the marketing question has led to a proliferation of private commercial and non-profit institutions active in promoting Haitian crafts but this is almost universally based on haphazard or fortuitous circumstances and not on a conscious overall marketing effort. A telling example

^{1/} Haiti: Problemes de Main-d'Oeuvre et d'Emploi, op. cit., p. 16.

^{2/} Estimates by the Bank's Tourism Sector Mission to Haiti in November 1977.

is the sisal rug factory created in 1976, which now provides direct employment equivalent to 150 full-time jobs, ^{1/} but started with a purely touristic visitor who happened to have the right interests, connections and skills and a good deal of luck.

2.28 The Industrial Promotion Office has initiated some relevant activity by sponsoring Haitian participation in a German trade fair late in 1977. The office also hopes to organize a permanent exhibition of foreign equipment and products in Haiti to acquaint the Haitian entrepreneurs with the competition and with new tools, design trends, etc. Thirdly, the office hopes to be able to provide financing for valid handicraft projects but, so far, has no credit funds at its disposal. Overall, this office hopes to create some 2,500 jobs in the craft sector over the next five years. All these activities are part of the mandate of the National Crafts Office, which should be given adequate resources to deal with its tasks.

D. CONSTRUCTION

2.29 Statistical information on construction activity is no better than for the other sectors discussed. In 1977, construction accounted for an estimated 5.1% of GDP excluding the materials subsector which was largely covered by the discussion of manufacturing. The building subsector is estimated to have grown by some 6% per annum in the 1970s with some acceleration of growth in the more recent years. Value added is concentrated in housing (70%) and industrial and commercial structures (25%), with public works (excluding major road investments) accounting for the remaining 5%.

2.30 Estimates of employment in the industry differ widely. Annex Table 2.2, based on work done for the PPHC project, gives construction employment for Port-au-Prince at 5,700 in the modern sector in 1975. Another estimate, also from PPHC data and based on total building investment in Port-au-Prince of US\$42.5 million in 1976, puts employment in the building sector of the capital at 36,000. Much of this, however, is less than full-time employment and on a full-time equivalent basis of 300 work days per year, employment in building in the city would be between 22,000 and 23,000. (See Annex Table 2.3). At the same time, the Institut Haitien de Statistiques (IHS) estimates employment in construction in 1976 at 18,000 in the urban area. Very roughly, employment in the building industry in Port-au-Prince may, therefore, be around 20,000 in full-time equivalent terms with perhaps some 35,000 people involved in all, many on a part-time basis. Country-wide, these figures would be about 10 to 20% higher. They also do not include employment in the production, transport, and marketing of building materials, which may account for another 6,000 to 7,000 persons.

^{1/} At less than US\$100 of investment per job.

2.31 From a 1971/1972 input-output table for the Haitian construction sector (including public works) it can be estimated that local raw materials account for some 25% of the gross value of construction and imported materials for another 12.8%, with the share of transport at 5.5% and services (including banking, engineering, etc.) at 12.6%. Of the 44% of value added in the sector, some two-thirds are estimated to accrue to labor. As mentioned before, some further scope exists for substituting local manufacture for some of the imports, particularly in ceramic-based sanitary equipment.

2.32 The future of building activity is relatively bright, on condition that the repatriation of Haitian capital continues and, more importantly, that adequate systems of long-term housing finance are established (see Chapter III). There is a severe shortage of housing, especially in the low and middle income categories, in all urban centers but effective demand is severely constrained by lack of suitable financing mechanisms. If these are established, employment in building could more than double by 1986.

2.33 Little is known about the problems of the building industry. No government institution has a clear responsibility to investigate its problems and provide what assistance may be required. The Ministry of Public Works provides some support to public works contractors, mostly through a small equipment leasing operation, but has not developed a coherent data base on the sector. This situation is likely to improve with respect to the public works part of the construction industry, following the recent creation of a heavy equipment leasing service (SLELC - Service de Location d'Equipment Lourde de Construction) by the DTPTC. An attempt at surveying the construction industry by the Ministry of Industry and Commerce failed for lack of response from the enterprises. It is generally known that skill and vocational training problems are similar to those in manufacturing and crafts and, in some provincial towns, both skilled workers and supervisors have to be brought in from Port-au-Prince for any building other than traditional wattle-filled, wood-framed houses with straw roofs. Much waste and loss of time occurs because even skilled workers are not sufficiently familiar with modern construction materials and foremen and supervisors are not well trained in site management. A deliberate effort should be undertaken to investigate the building industry and develop a proper understanding of its functions, importance and problems. There is also a need for research into low-cost building technology.

E. THE INFORMAL SECTOR

2.34 The bulk of the urban labor force is employed in the informal sector and some 60% of the gainfully employed in Port-au-Prince belong to it. This proportion is probably even higher in the regional towns, except for the significant number of their residents occupied in agriculture. In 1975, it was estimated that the informal sector in Port-au-Prince comprised some 194,000 people (see Annex Table 2.2). A small number of craftsmen are classified as falling in this sector by the PPHC project, but the vast bulk of the sector's activities is concentrated in domestic services (78,000), small

trading activities (40,000) and other activities (74,000). The latter category is labelled "other services" by the PPHC project but this is probably a misnomer. It is in effect likely that this figure includes many casual laborers, like those that might work in construction activities and, on the basis of an in-depth study of the St. Martin slum neighborhood 1/, a considerable amount of income in the informal sector is generated by manufacturing activities.

2.35 Such projections as exist of the size of this sector indicate that it will practically not decline in relative importance for years to come. The IHS has projected that, from 61.4% of urban "employment" in 1976, the sector will move to 60.2% of urban "employment" in 1986. 2/ Over the same period, the number of people engaged in informal activities is projected to rise from 196,000 to 322,000 in Port-au-Prince and average value added per job in informal activities to deteriorate.

2.36 Given the numerical importance of the informal sector and its predominant role in providing income to the poor, it is unfortunate that more is not known about its workings and problems. The only insights we have now come from the above cited study on Families in Port-au-Prince, etc., and some of them can be summarized as follows: 3/

- (a) A significant proportion of the incomes of those that simply sell their labor come from "modern" activities in circumvention of the minimum wage legislation. Strict enforcement of wage laws might restrict earnings opportunities for this group, at least in the short run. It might also lead to substitution of capital for labor which, even if only marginal, would be counter-productive in the Haitian context.
- (b) Trade activities offer many income opportunities at earnings levels that, in the neighborhood investigated, average US\$0.60 per day with little variation between traders. Despite seasonal fluctuations and heavy competition, profit opportunities exist due to the limited availability of working capital which restricts entry to some extent. If working finance were made more generally available and demand did not increase pari passu, the net effect of new entrants into trade might be to drive individual earnings down.
- (c) Those that engage in manufacturing activities are at the same time traders in buying inputs and selling their output. For the trade part of their activity, similar considerations on capital

1/ Families in Port-au-Prince: A Study of the Economics of Survival by Simon Fass, mimeographed, Washington, D.C., September 30, 1977, prepared for and cited by courtesy of USAID, Office of Urban Development.

2/ The percentages of total employment are lower in the IHS projection than in Annex Table 2.2 based on PPHC data because the latter table covers only part of total employment in Port-au-Prince. In absolute terms, PPHC and IHS figures for the informal sector are virtually identical.

3/ See Families in Port-au-Prince, etc, op.ct. chapter on Conclusions and Recommendations, page 149 ff.

availability apply as mentioned above. However, the problems identified and, consequently, the type of assistance that might be fruitful to small manufacturers, cover the whole range of business promotion services, from better information about markets and products to better equipment, more investment and working capital, better techniques and management, cooperative purchasing and warehousing services, etc.

- (d) Interactions between producers and market are characterized by heavy transaction costs, i.e., workers invest much time in order to exploit the imperfections in the market or avoid being exploited by them.
- (e) Opportunities for government procurement of labor services and products from the informal sector exist and should be more fully exploited to help alleviate the demand constraint which dominates most of the activities of the informal sector. 1/
- (f) The income of most traders and manufacturers in the informal sector is highly sensitive to the organization of space. The impacts on earnings from informal activities of urban projects in transportation, market facilities, harbors, housing, etc. must be clearly understood and integrated into the analysis of urban programs.
- (g) Certain types of public infrastructure or their absence may have significant effects upon income production processes. Informal activities are usually highly integrated with shelter and make slum areas significant warehousing centers and industrial workshop areas. Disasters such as fire, flooding or epidemics affect the ability of households to accumulate productive resources. Improvements in disaster prevention will markedly strengthen income earning capabilities and can be justified on economic grounds.
- (h) Financial assistance needs to be applied selectively. While only a small proportion of families would benefit from cheaper credit (interest rates are now as high as 60% per month), it is for them a precondition for productivity change, innovation and experimentation.

2.37 The major conclusion that emerges from this study is that the informal sector, in all its diversity, is a sensitive tissue of relationships producing a livelihood of a sort for a large number of people which can and should be helped. Assistance must, however, be carefully tailored to the circumstances of the people it is supposed to benefit. Unconsidered interference could be disastrous. The study needs to be repeated in other neighborhoods of the city and translated into actual policy proposals and action.

1/ Although this is not explicitly addressed in the study, the Haitian experience with labor-intensive methods, both in the building sector and in some government infrastructure works such as the feeder roads program, should provide a good basis for using labor-intensive methods in slum-upgrading and sites and services schemes.

F. SUMMARY AND CONCLUSIONS

2.38 Conceptual difficulties and almost universal lack of reliable and comprehensive statistics inhibit a clear analysis of employment problems in Haiti. However, unemployment, underemployment, and very low productivity jobs are clearly a major problem that affects more than half the labor force. Labor force participation rates are high at more than 50% and nearly 75% of the labor force are active in agriculture, the major employer.

2.39 While the labor force in rural areas will stagnate or continue to decline slightly, that in urban areas will grow by some 4% per annum in the next ten years. This will exacerbate the employment problem in urban areas. Modern manufacturing, which now accounts for less than 10% of total urban employment and about 13% of GDP, may absorb only 12 to 13% of this increase. While construction and crafts are also likely to absorb parts of the increase, the bulk of the additional labor force will have to earn a living in the informal sector. As a result, average earnings in informal activities are likely to decline relative to other earnings opportunities in urban areas.

2.40 Industrial development is not one of the top priorities of the development plan and industrial policy is inadequately developed. Three objectives are, however, emerging, i.e., increases in exports, particularly of labor intensive manufactures, the replacement of export assembly industries by those based on national resources and decentralization to the provinces. All three of these objectives face severe implementation problems.

2.41 In the 1970s, industrial production, employment and exports were led by export assembly industries, mostly consumer goods manufacturing. Export prospects continue to appear brightest in such industries, as long as the favorable conditions that attract them are maintained. However, their links to the national economy remain very limited, and it should become an objective of public policy to realize the potential for increasing the local value added of the assembly operations. Replacing them in the country's export performance by resource based industries is, however, severely constrained. Unexploited mineral resources are mostly in building materials and brown coal, which are unsuitable for vigorous export growth. The recently discovered copper ore body, if commercially viable, could not contribute to exports until the mid-1980s. Agro-based industry potential depends on the success of the agricultural development effort which will take time to achieve. Until then, potential for agro-based manufacturing exports is limited to fruit and vegetable canning and exports made possible through the modernization and quality control of essential oils production. These should be vigorously pursued.

2.42 Fairly good export prospects also exist in crafts. The market share of Haitian products in the US, which is the major client, is no more than 2 to 3%, and Haitian products are just beginning to enter the European market. To exploit the potential, the government will have to pursue a coherent and dynamic policy of crafts development, especially in marketing and product development but also in raw material supply, finance and crafts

training. The recently created National Crafts Office has the mandate to do so and should be made operational, with adequate resources and as a matter of priority.

2.43 A number of conditions prevent industrial decentralization away from Port-au-Prince, which now accounts for over 90% of employment and wage payments, from becoming a reality. Industrial infrastructure in the provincial towns such as water, power, transport, and telecommunications is in short supply or more costly. ^{1/} Institutional finance for industrial investments is practically only available in Port-au-Prince. Recent measures to encourage decentralization through fiscal incentives provide only minor stimuli to locate outside the capital. The minimum wage legislation does not include any incentive to locate plants in the regions and the National Electricity Tariff, now implemented, simply removes the past preference in favor of Port-au-Prince but provides no compensation for the higher transport and administrative costs of operating in the provinces. Projects are underway or planned on many infrastructure improvements but will not match the Port-au-Prince facilities, which are themselves not without shortcomings, for years to come.

2.44 The building industry has good prospects providing that return flows of Haitian capital continue and, above all, that adequate housing finance mechanisms are developed. But knowledge of the prospects, importance and problems of the building industry is practically non-existent. The DCI should be asked to develop such knowledge and act upon it to develop the role of the construction industry in the economy.

2.45 Similarly, knowledge of the workings of the important informal sector needs to be developed beyond the partial understanding now available. The sector provides a living of a kind to some three-fifths of the urban population and will not appreciably decline in relative importance while continuing to grow rapidly in absolute terms. Its numerical importance for the urban poor makes it urgent to devise assistance to these activities and to carefully develop modes of intervention that will not endanger its functioning. Tentative ideas for such assistance are available but must be developed into concrete policy proposals and supported by further analysis of the situation in the sector.

2.46 Throughout the urban employment spectrum, sustained efforts must be made to improve technical and vocational training. Most training is now done without reference to a comprehensive human resources development strategy, with inadequate quality and quantity of teachers and didactic materials and almost always without reference to the needs of entrepreneurs. No coordination exists between the multitude of organizations active in the field. Initial efforts to address these problems through the INFP need to be pursued vigorously and on a sustained basis. At the same time, consideration should be given to the creation of an extension service to assist small enterprises with technical and managerial problems. No such service exists at the moment, although the BHPI provides some help on a selective basis.

^{1/} Among these, it is reported that insufficient and unreliable power supply is considered the most serious constraint by potential investors.

CHAPTER III. URBAN SERVICES

A. SHELTER - PORT-AU-PRINCE 1/

3.01 Housing conditions in Port-au-Prince are poor. About 13% of all dwelling units are made of scrap materials, 19% of wattle and straw and another 32% of wood. More than three-quarters of the homes in the city are not connected to the water supply system. Residential densities are very high. In 1976, an estimated 132,000 dwelling units in the city housed 640,000 people. The number of independent structures, however, is very much smaller, because many buildings have anywhere between two and eight rooms, each occupied by separate low- and middle-income households, and many rooms are shared by more than one family. Sixty-one percent of dwelling units offer less than 3 m² per resident and 43.7% of the urban population occupy about 12% of residential land at gross densities in excess of 800 persons per ha.

3.02 Table III-1 gives estimates of gross residential densities in the city. The higher of these densities, unusual for one-storey residential areas, reflect high demand from low-income families for residential space in proximity to work-places in the downtown area. Though there has been considerable growth of low-income residential areas on the periphery of the city, the built-up areas continue to grow denser. For example, extrapolation of 1971 census data in combination with an analysis of aerial photographs made in 1973 indicated that the population density of the St. Martin neighborhood was then about 1,500/ha 2/. A complete survey indicated that, by 1978, density had increased to over 1,600 persons/ha. 3/

1/ See maps on Port-au-Prince City Orientation and Residential Population Density.

2/ Project "Planification Physique, Habitations et Construction": Plan de Developpement de Port-au-Prince et de sa Region Metropolitaine. Phase III, Vol. V: Habitat, UN Project HAI/SD 09 70. Port-au-Prince, February 1976.

3/ Information Supplied by DATPE, Ministry of Planning.

Table III-1: GROSS RESIDENTIAL DENSITIES IN PORT-AU-PRINCE, 1976

Density Class (persons/hectare)	Population ('000)	% of Population	m ² per resident (gross)
- 199	89.7	14.1	> 50.0
200 - 399	111.5	17.4	50.0 - 25.0
400 - 599	86.5	13.5	25.0 - 16.7
600 - 799	72.0	11.3	16.7 - 12.5
800 - 999	77.0	12.0	12.5 - 10.0
1,000 - 1,199	90.0	14.1	10.0 - 8.3
1,200 - 1,399	80.0	12.5	8.3 - 7.1
1,400+	32.0	5.1	< 7.1

Source: World Bank estimates based on "Plan de Developpement de Port-au-Prince, etc." Vol. V: Habitat, op. cit., and on "Families in Port-au-Prince, etc.," op. cit.

3.03 With high gross densities and the prevalence of one-storey structures, the average size of dwelling units tends to be small. PPHC ^{1/} estimated that the average size of 45% of the urban housing stock is about 10 m², and another 16% is about 15 m². Dwellings averaging 40 m² constitute 25% of the stock, reserved for higher income groups, and only 13% are larger than 60 m². These figures indicate that most families, given the price structure for land, construction and rent, the lack of adequate credit mechanism, the existence of other expenditure priorities such as food and water, and the out-of-pocket and time costs of commuting cannot spend more than required to obtain a bare minimum quality and quantity of housing.

Land

3.04 Due to the non-existence of either a cadastre or published information on land transactions, it is impossible to obtain comprehensive and accurate data on the characteristics of the market for land. From partial information based on private records of real estate brokers, PADCO estimates ^{2/} that, in 1973 and 1974, about 2,000 larger land transactions took place for a total of US\$10 million. About 10% of the transactions were of the order of US\$20,000, 40% of the order of US\$5,000 and 50% of the order of US\$2,000 each. Roughly 40% of the land was sold for residential use, 40% for industrial use, and 20% for commercial use. Demand was concentrated in areas occupied by large industrial and commercial concerns and by high-income homes.

3.05 Lot and parcel sizes vary throughout the city. In the residential areas of Carrefour, Turgeau, and Bois Verna they are of the order of 120 to

^{1/} Plan de Developpement de Port-au-Prince etc., Phase III, Volume V, Habitat, op. cit.

^{2/} Ibid.: includes only transactions processed by or large enough to be known by brokers and notaries. See also map on water consumption and land prices in Port-au-Prince.

150 m² because of heavy demand by low- and middle-income groups for residential space in proximity to work places and urban services. In newer and less dense areas, such as Delmas and Diquini, subdivisions are of the order of 400 to 550 m². On the periphery of the city, where the highest-income groups live, such as Petionville and Laboule, lots are about 1,000 m².

3.06 Land values in the city average out at US\$8 per m² with downtown values averaging from US\$50 to US\$150, older built-up residential areas from US\$10 to US\$20, newly developing areas from US\$5 to US\$10, and peripheral areas from US\$1 to US\$5. As expected, variations reflect desirabilities associated with the proximity to major thoroughfares or the coastline, with panoramic views, etc.

3.07 It is clear that the land prices are high relative to the income levels of the low-income population and the savings levels which such incomes permit. A US\$300 land investment, which would either secure a 15 m² lot in the built-up areas of the city or a 60 to 120 m² lot on the periphery, is beyond the reach of most low-income families since financing mechanisms with reasonable maturities are not available (see below), and legal and fiscal transactions costs may run as high as US\$30-US\$40 for such a purchase.

3.08 Supply of land to low-income purchasers is also constrained. Land is held by a relatively limited number of urban property-owners with relatively large holdings, many of which held for speculative purposes. Sale or leasing of small lots for low-income residential use might tend to deflate the attractiveness of the remaining property. Furthermore, if the owner wishes to develop the property himself for other purposes at a later date, he would have to incur considerable administrative and financial costs for displacing large numbers of people. Consequently, the number of property-owners who are willing to sell or lease to low-income customers tends to be limited.

Construction Costs

3.09 Construction costs for housing vary from a low of US\$7/m² for structures built of wood and scrap materials, to a high of US\$140/m² for structures built of concrete with reinforced concrete roofs. Costs also depend on the scale of construction (i.e., material costs are higher when bought in small amounts), the infrastructure services included, the type of labor and the building methods used. The cost of materials used in house-building has increased rapidly as a result of increased demand, decreased supply (local wood) and increases in the cost of energy used in production of cement and steel. Table 3.1 in the Annex indicates materials prices in 1976, the increase in some of them since 1970 and price differentials associated with different scales of purchase.

3.10 Where construction is carried out with hired help, the cost of labor varies with the type of building and with the contractual

arrangements between builder and worker. Generally speaking, for most low- and middle-income housing, unskilled labor will earn less than the minimum wage and the wage bill will be between 20% and 25% of total construction costs. Somewhat higher wage rates and labor cost proportions apply in high-income buildings. ^{1/} Though the unit costs appear ^{2/} to be reasonable for a low-income family, ranging from US\$7/m² to US\$50/m², a 15 m² house will still require an investment of between US\$105 and US\$750, in addition to the price of land.

Housing Finance ^{2/}

3.11 Given the level of land prices and construction costs, one key element necessary to make the market for land and dwellings accessible to low- and middle-income groups is appropriate finance. Prior to 1963, mortgage loans for land purchases were quite commonly issued by private individuals active in the market. In 1963, a law on reassessment of land was promulgated that aimed at reducing the insolvency of debtors by requiring that creditors pay their debtors whatever increase in the value of the land had occurred since the loan was issued, prior to forcing its sale for a loan in default. Creditors now assumed the resale risk and could no longer count on prior debtor land improvements to cover interest in default and resale transaction costs so that this form of mortgage loan has all but disappeared. ^{3/}

3.12 In Port-au-Prince, short-term private loans are available at a secured interest rate of about 25% per month and an unsecured rate of about 60% per month. ^{4/} These rates are generally too high for the purchase of land or for the construction of a house. They are, however, used frequently for the leasing of land and six-month dwelling unit leases. The savings in both cases are more than enough to cover the interest payments if repayment is made within six weeks to four months, depending on the interest rate (see para. 3.21.)

3.13 Beyond these types of credit, mortgage finance is limited to that available from large-scale commercial and public institutions. Since the passage of a law in August 1975 limiting the rights of foreigners to own property, all foreign banks and individuals have ceased to make mortgage loans and mortgage finance is now the exclusive domain of purely Haitian institutions.

3.14 Two major institutions, the Central Bank (Banque Nationale de la Republique Haitienne - BNRH) and the National Insurance Office (Office National d'Assurance - ONA) presently provide mortgages. A third one,

^{1/} See Annex tables 3.2 and 3.3 for some details on wage levels and construction costs.

^{2/} Pari passu, this discussion also applies to provincial towns.

^{3/} Projets et Planification en Haiti. Volume IV: Logement, CONADEP/ Louis Berger Inc., Port-au-Prince, February 1977.

^{4/} Families in Port-au-Prince, etc., op. cit.

the Housing Bank (Banque de Logement - BDL), may become operational in the future (see Chapter IV). The BNRH is the more important of two main institutions active today. In 1975/76 and 1976/77, it granted mortgage loans for residential and non-residential purposes for a total of US\$4 million each year, up 170% over the level of US\$1.5 million in 1972. In 1976/77, 1,157 mortgage loans were granted, up from 900 in the previous year but average loan size fell to US\$3,500. Mortgage loans are issued to personally known customers, carry an interest rate of 12% with a maturity of only five years, and are limited to 50% of the intended total investment.

3.15 ONA, the other main institution active in mortgages, initiated a program of residential mortgage loans after enabling legislation was passed in November 1974. Access to the loans is limited to those of the 58,000 individual contributors to ONA who had a perfect payment record for five consecutive years. Initially, loans were limited to US\$5,000 at 12% over five years. The fund for this purpose was then US\$200,000 and 20 loans a year were made. By September 1977, funds had increased to US\$250,000, the number of loans to 33 a year and loan conditions were changed to a maximum of US\$10,000 at 8% for 8-1/2 years. Funds for fiscal 1977/78 were increased to US\$500,000 and the number of loans was expected to rise to 60 per year. 1/

3.16 When the BDL becomes operational, 2/ changes in the mortgage activities of the BNRH and the ONA may occur. While BNRH mortgage lending may continue at present levels, it may well shift to lending exclusively for non-residential purposes. The ONA mortgage fund might be significantly reduced or may even disappear. In fact, the law of August 1974, recreating the BDL, authorizes ONA to place a portion of its funds with the BDL with the amount and terms to be negotiated by the two agencies.

3.17 It is clear from the above description and, in particular, from the unusually short maturities now in force for institutional mortgage finance, that the vast majority of the Port-au-Prince population does not have access to housing finance. Whether this situation will change significantly when the BDL becomes operational is far from certain. The initial OAS proposal for setting-up the BDL included a suggestion for lending to low-income families with monthly incomes of US\$40-US\$60. This would exclude about a third of the present urban population in Port-au-Prince and a higher proportion in the provincial towns. However, the weight of opinion among people who will decide such operational issues, while not being unanimous, appears to be that direct BDL finance and housing development should focus on borrowers earning at least \$200 per month, thereby excluding more than 95% of the urban population.

1/ Some private banks, like the Banque Populaire Haitienne, the Banque de l'Union Haitienne, etc., are also active in mortgage lending, but at a very small scale. Information on their activities was not obtained.

2/ The difficulties that have delayed the start of the BDL's operations are detailed in Chapter IV.

Renting

3.18 With the costs of land and construction coupled with inadequate or non-existent mortgage finance, it is not surprising that about three-quarters of Port-au-Prince families are renters. Squatting is a very short-lived and rare phenomenon in the city. On public lands, which the State has not leased officially or has reserved as road easements or for environmental reasons, such as ravine and river banks, rents are collected by individuals charged with managing the land or with ensuring that it is not invaded by permanent structures.

3.19 Four basic types of rental arrangements are practiced. First is the weekly rental of a dwelling unit usually made by the lowest income families, about 8% of renters 1/ who cannot commit the larger cash amounts required for longer periods. The homes are usually small and in very bad condition, but still require larger proportional expenditures of income and larger per unit rents than other arrangements. 2/

3.20 The largest groups of renters, about 40%, rent on a conventional month-to-month basis. Households in this category tend to have incomes in the mid-range of the poor majority or above. The poorer part of this group again cannot or does not wish to commit larger cash amounts beyond a one-month period. The homes tend to be of better quality than the weekly rental units and the costs per m² are far less. High-income families that live in rented housing choose this basis because they save nothing by longer-term leases.

3.21 Low-income renters, however, get a 50% reduction in the rental charge, if they prepay rents for 6 to 12 months and 33% of the rental population do so. Families renting in this manner usually have the same income levels as low-income monthly renters but, systematically, dispose of larger amounts of working capital and perceive a lower opportunity cost for committing cash for 6 to 12 months. Quality and size of the dwellings will be the same as those rented on a monthly basis. Rental options thus permit families of equivalent size and income to obtain equivalent shelter at completely different rates. The choice depends less on income per se and more on the perceived value of cash over time.

3.22 Finally, about 18% of renters lease land on long-term and build their own units. Families in this category tend to be in the upper strata of the low-income and in the middle-income ranges. The lack of security on the land obliges these families to build relatively primitive shelters which can be taken down and transported to another location at the expiration of the lease, so that the outward appearance of houses in Port-au-Prince is

1/ The percentages of renters practicing the different types of arrangements are indicative only, since they are based on a small sample.

2/ Families in Port-au-Prince, etc., op. cit.

not an accurate indicator of the economic status of their inhabitants. It should be noted also that many renters sublet. There are no legal or cultural norms which control subletting practices.

3.23 In addition to this housed population, there may be some 30,000 people who sleep in the streets. 1/ Some of these are members of households which have homes which are too small to contain all members at one time, so they have to sleep outside in shifts. Others are market women who commute from rural areas each week and sleep near their goods in the markets. A third group may be families who temporarily cannot afford a weekly rental and who cannot move in with family or friends. Finally, there are single men without household attachments who have very low earnings, do not accumulate possessions, and find little usefulness in housing. The actual number of people who "need" housing but cannot afford it over extended periods is far less than the 30,000 figure would suggest.

Housing Demand Projection

3.24 The data base for estimating housing demand in Port-au-Prince is weak. A rough approximation of the price-income elasticity of demand has been made recently by Louis Berger International, Inc., consultants to CONADEP for the preparation of the 1976/81 National Development Plan. 2/ It was based on socioeconomic data gathered by the Institut Haitien de Statistiques in 1970. 3/ The firm arrived at an aggregate income elasticity for housing of about 0.73 across the Port-au-Prince population. Combining this figure with the estimated rate of household formation in Port-au-Prince of 5.3% p.a. and household real income increases of 1% p.a. 4/ results in a rate of growth of investment in housing of 6% p.a. through 1981. Applying this rate to the estimated level of housing investment in 1976 of US\$28.7 million results in a total investment of US\$171 million over the period 1976/81. The estimated distribution of this investment by type of housing is given in Table III-2 below. This very crude estimate does not account for the possible effects of increased financing of low- and middle-income housing, which might move effective demand for housing to a higher level. The impact of better housing finance, however, is unlikely to be significant before 1981.

1/ Families in Port-au-Prince, etc., op. cit.

2/ Projets et Planification en Haiti, Vol IV: Logement, op. cit.

3/ Enquete Socio-Economique (April 1970), Premiers Resultats, IHS, May 1975.

4/ This may be too conservative.

Table III-2: ESTIMATED HOUSING INVESTMENTS IN PORT-AU-PRINCE
1976-1981 - US\$ 1976

<u>Average Cost Per Unit (US\$)</u>	<u>Number of Units</u>	<u>Total Capital Investment (US\$)</u>	<u>Percentage of Investment</u>
400	27,000	11,000,000	6.5%
6,000	6,000	30,000,000	17.5%
20,000	5,000	100,000,000	58.5%
Repairs	-	30,000,000	17.5%
TOTAL	38,000	171,000,000	100.0%

Source: World Bank estimated based on: Projets et Planification en Haiti,
Vol. IV: Logement, op. cit.

Shelter Policy and Activities

3.25 There is currently no single institution or group of coordinated institutions which have developed anything resembling a coherent national or urban housing strategy or policy. The housing section of the five-year plan is more a collection of projects than a statement of policy. There are, however, four public agencies and some private organizations that have activities relevant to the housing sector, not counting the financial institutions already mentioned. The relationships among these institutions are discussed in detail in Chapter IV. This section will describe the activities of the National Housing Office (Office National de Logement - ONL) and the evolution of the UNCDF-financed pilot projects for slum-upgrading and sites-and-services.

3.26 The ONL was created in 1966, is under the supervision of the Ministry of Social Affairs and, within its very wide mandate, administers all public housing projects executed thus far. These are listed in Table III-3. All these projects were constructed under the auspices of the Department of Public Works and then placed under the management responsibility of the ONL. Some of the projects in the list, in particular Cite 1 and Cite 2 and the project in Gonaives, consist of middle-income housing. In Port-au-Prince, only some 1,370 dwelling units presently managed by ONL can be considered low-income housing. This represents the bulk of past public activity in low-income housing and is obviously marginal at best.

Table III-3: PUBLIC HOUSING PROJECTS MANAGED BY THE ONL

<u>Project Name/Location a/</u>	<u>Number of Units</u>	<u>Original Construction Cost (US\$)</u>	<u>Monthly Receipts (US\$)</u>
<u>Port-au-Prince</u>			
Cite No. 1	115 b/	130,000	1,040
Cite No. 2	229 b/	435,000	4,600
Simone O. Duvalier	1,197	-	0
Jean Claude Duvalier	128	230,000	0
Croix Rouge	48	-	0
Gonaives	19	-	120
Cayes	14	-	11
Jeremie	185	31,000	0
Cap. Haitien	32	-	25
Port de Paix	20	-	16
Total	1,987	-	5,800

a/ Dates of construction are known only for Cite No. 1 (1955/58), Cite Jean Claude Duvalier (1975), Croix Rouge (1971) and Jeremie (1966).

b/ Includes only homes not yet transferred to buyers. Homes in these two projects are being sold to residents over a 20-year period.

Source: Projets et Planification en Haiti, Vol. IV: Logement, op. cit.

3.27 Most of the low-income units provided to date are well over 20 years old. Since 1971, the 128 dwelling units in the Cite Jean-Claude Duvalier, built in response to the 1975 downtown fire that displaced 5,000 people, were the only sizeable low-income (although relatively high-cost) housing project. A previous fire in 1972, that displaced 6,000 people living near the central market, led to the joint government/church effort that provided unserviced sites on public marshland at Brooklyn, on the northern periphery of the city. Another relocation program on unserviced lots, involving the removal of 1,000 families in the path of the port expansion, is currently underway in an area called Boston, located next to Brooklyn. One can, therefore, state that since 1971, public action has or will provide housing and "sites without services" to up to 18,000 people, none of which represents an addition to the low-income housing stock but simply relocation. This is well below the Port-au-Prince population increase in a single year.

3.28 Over the years, several of the many private voluntary organizations that operate in Port-au-Prince have also attempted small-size efforts

in the housing field. These have mostly been unsatisfactory because a combination of high design standards and low incomes of the target groups has resulted in low repayment schedules and the depletion of investment funds.

3.29 The St. Martin slum-upgrading 1/ and Drouillard sites-and-services 2/ projects financed by UNCDF are the only sizeable public shelter projects nearing the implementation phase. Staffing of the project unit has started in March 1979 and is to be essentially finished by mid-year. The St. Martin project affects a population in excess of 20,000 and the Drouillard project will provide serviced sites or, possibly, more complete shelter to 1,000 low-income families. Both were prepared by DATPE/CONADEP/UN staff on the basis of previous work by PPHC. The Foundation for Cooperative Housing (FCH) has evaluated these proposals, and assisted in preparing the project documents. 3/

3.30 A detailed analysis of the two projects and their evolution reveals a number of problems. First among these is the cost increases since early 1976. 4/ The St. Martin project, initially costed by PPHC at US\$401,000 is now expected to require US\$3,210 million 5/ and the cost of the Drouillard project has risen from US\$682,000 to US\$1.53 million. A large part of these increases can be traced to decisions to upgrade the services provided. In St. Martin, the decision to upgrade the planned paved pathways to wider roads suitable for vehicle access has led to an increase in displaced families from 220 to about 740, which means the relocation of some 15% of the St. Martin population.

3.31 In parallel, it was also decided to impose building standards for about 600 housing units for the displaced families in St. Martin itself, rather than simply provide the bare or semi-prepared lots initially foreseen. Financing of these units for costs other than labor is now included in the project. For the Drouillard project site, cost figures for one of the possible variants now include the construction of 1,000 houses at US\$750 each plus 10% contingencies, but design work is less advanced than in St. Martin and the degree of home completion to be provided by project management is not yet decided.

1/ Avant-Projet pour la Rehabilitation du Quartier St. Martin, CONADEP/UNDP--Projet HAI/77/007, Port-au-Prince, October 1977.

2/ Esquisse de Projet Pour Parcelles Assainis/Drouillard, CONADEP/UNDP Projet HAI/77/007, Port-au-Prince, October 1977.

3/ Assessment Report of the UNCDF on Proposed Sites and Services and Slum Rehabilitation Programs in Port-au-Prince, FCH International Inc., March 1977.

4/ See Annex Tables 3.4 and 3.5 for details.

5/ Including the cost of technical assistance and management of both projects.

3.32 Another source of rising costs is the complex management structure for the projects (see Chapter IV). Costs for project management now stand at US\$1,312 million or 28% of total project costs. Significant savings could have been made if the Administration Generale des Contributions, the Ministry of Social Affairs and the competent services of the DTPTC had been involved with their regular functions. It is also doubtful that as many as seven foreign experts should be involved. If the project is too sophisticated for local capabilities, which is not certain, it might have been more appropriate to maintain lower design standards.

3.33 Another problem is the absence of a cost-recovery schedule for the expected outlays. This is important because at the St. Martin cost of US\$104 per caput, excluding the large technical assistance element, the price of upgrading the high-density slum areas occupied by another 306,000 residents of the city would amount to nearly US\$32 million at 1977 dollars. A significant part of the cost of upgrading schemes, such as for road building, should be borne, as usual for this type of investment, by the general budget. Other types of improvements should, however, be financed by the beneficiaries. The St. Martin project team is expected to define a cost recovery schedule from beneficiaries. Only when this becomes available will it be possible to assess the budgetary consequences of extending the St. Martin approach to the rest of the slums in the capital and whether and over what time span it will be possible to upgrade the Port-au-Prince slums in this manner. As for Drouillard, the site was partly chosen because of its proximity to employment opportunities in the coastal shipping port, the industrial estate and northern truck terminal, the latter possibly associated with a decentralized market. It is, therefore, hoped that the Drouillard scheme will attract a clientele that is able to pay for homes costing up to US\$825 each on plots costing about US\$95, despite its peripheral location and the discouraging drainage problems on the site. Before a final decision is taken on the design standards for this project, it might be advisable to inquire into the characteristics of the population planning to relocate to Drouillard and their ability to pay.

3.34 The projects are also affected by a number of design questions relating both to physical design and to management, such as relying primarily on cooperative approaches for house building and management of the revolving fund, in St. Martin. Cooperative approaches are not in the tradition of the urban population and doubts are permitted whether and how quickly they can be made to function adequately. Also, a precondition for start-up of the St. Martin project is the reconstruction of the Rockefeller drainage canal through the middle of the neighborhood. This is part of the IDB drainage project discussed below. ^{1/} The Rockefeller canal would be given priority in actual construction work, which is scheduled to start late in 1979 or early 1980. This is rather late in relation to the time schedule of the UNCDF project. If the government decides to rehabilitate the canal before implementation of the IDB project, IDB is sympathetic to reimbursement of the cost, provided IDB's design and labor-intensive construction methods are followed. However,

^{1/} See Section B below for details.

the Service de Genie Municipal, 1/ which was the relevant executing agency, was not aware of the immediate need to begin construction.

3.35 A number of other shelter proposals have been made since 1972. Apart from the Port-au-Prince shelter programs developed by PPHC, which served as a starting point for the UNCDF projects, none of them have so far progressed towards implementation. This is also true for the five projects that make up the shelter component of the five-year plan and for the middle income housing project of the ONL that is not included in the plan.

B. ENVIRONMENTAL MANAGEMENT - PORT-AU-PRINCE

3.36 The issues of stormwater drainage, erosion, solid and liquid waste collection and disposal in Port-au-Prince are closely interrelated elements of the single problem of urban environmental management and are therefore discussed as a group under that heading.

Stormwater Collection and Disposal

3.37 Most of the stormwater drainage system in Port-au-Prince was built between 1910 and 1920. In 1949, the drainage channels were extended through the landfill along the downtown shoreline, which became the site of the International Exposition. These man-made elements are complemented to the south and east by a series of natural drainage ravines which run down the slopes of Morne l'Hopital, a hill rising steeply behind the city to an altitude of 1,000 m.

3.38 Stormwater flows down the steep ravines into open drainage channels and then through stormsewers to the sea. Eroded material carried by the runoff is supposed to deposit in a number of settlement basins scattered throughout the flatter portions of the system. However, the large quantities of eroded material, variously estimated at between 100,000 and 200,000 tons a year, quickly fill the settlement basins and many become full after a single storm. Boulders, stones, gravel and sand therefore pass over the barriers into the lower reaches of the system. As runoff speeds decrease, the material progressively settles into the open channels and sewers, especially in the very flat downtown areas near the landfill zone. As a result, the drainage system is heavily obstructed for most of the year and general estimates suggest that flow capacity is reduced by 75% in the downtown area and by 50% in areas peripheral to the centre. 2/ This results in flooding of various parts of the city during each storm and more extensive flooding after each subsequent rainfall as flow capacity is further reduced. 3/

1/ The law of July 19, 1978 has modified the organization of the DTPTC and the construction would now be under the responsibility of the Service de Construction et de Supervision.

2/ Etude et Avant - Projet des Reseaux d'Egouts et d'Evacuation des Eaux Pluviales. Engineering Science Inc., and McLaren International Ltd., Port-au-Prince, 1972.

3/ See Port-au-Prince City Orientation map for areas subjects to flooding.

Erosion

3.39 The degradation of the drainage system through erosion materials is a relatively recent occurrence. Among the contributing factors should be mentioned:

- (a) the destruction of the ground cover on the slopes of the Morne l'Hopital through deforestation, goat grazing and corn cultivation;
- (b) uncontrolled urbanization and road-building projects on the lower slopes of the mountain which are being carried out without appropriate drainage facilities;
- (c) suspension of work on the "Canape Vert" road from the city to Petionville. The unstabilized roadbed that was cut for 6 km alongside a major drainage ravine is a major source of material washed into the drainage system; 1/
- (d) construction of another badly drained road with similar, though less disastrous, impact from Boutilliers, at the top of the mountain, to the Sanatorium near the center of the city; and
- (e) the major sand quarry on the south face of Morne l'Hopital which exposes several thousand square meters of loose sand to the rain. Erosion material from this area does not yet affect the central part of the city but it drains around the mountain to affect the western urban periphery at the mouth of the Riviere Froide in the Carrefour area.

Flood Damage and Costs

3.40 The design of the drainage system is adequate to carry rainwater from severe storms most of the time but not for transport of as much solid material as it is forced to carry today. 2/ Thus, flooding is regular during the rainy season and gets progressively worse as water absorption capacity of the soil and the carrying capacity of the drainage system both decrease.

3.41 On the flatter slopes of the downtown area the drainage system simply fails to function during storms. Water and mud flow through the

1/ While the completion of the road would reduce or stop the erosion material coming from the road itself, it would also make adjacent land more valuable and lead to more residential development and increased runoff. The alternative is to restore the site of the road to its original condition.

2/ In addition to erosion materials, the system is widely used for disposal of solid waste, which is dumped into the system directly or washed into it from hillsides, streets and empty lots (see below).

streets and stagnate in the shoreline landfill area, allowing the sediment to settle. The health hazards associated with continual flooding in the downtown area are compounded by the presence of solid and human waste in the stormwaters and its infiltration into the drinking water distribution system which is under irregular internal pressure with pipes lying exposed on the surface of many streets.

3.42 Eroded materials and other solid waste flushed down the Bois de Chene ravine settles in part at the mouth of this ravine, located at the souther end of the downtown area. This area is used as a landfill and the debris cleared from the drainage system and from the streets after flooding is deposited there. Between the closing of the garbage dump near the central market in mid-1976 and the opening of the new dump north of the city late in 1977, the city's garbage was also deposited there. Part of the material, however, is pushed out to sea and causes silting of the harbour which requires periodic dredging.

3.43 A conservative estimate places the value of private property losses in the city at around US\$500,000 per year, 1/ but the degeneration of the drainage system also leads to important increases in public expenditures necessary to cope with the problem. A recent estimate 2/ places the maintenance cost of the drainage system alone at about US\$100,000/year, excluding crisis allocations for additional day workers and equipment and dredging of the harbour area each season. Additional costs arise from the repair of damaged or destroyed roads and bridges, which can be estimated to have cost, since 1974, some US\$600,000 3/ or about US\$200,000 p.a. Finally, the Service de Genie Municipal of the Department of Public Works, which is in charge of construction and maintenance of roads, bridges and the drainage system has requested the acquisition of about US\$500,000 worth of equipment for these operations.

3.44 Pending a thorough rehabilitation of the system, some of this expenditure could be avoided through better management of available resources. Instead of using extraordinary allocations after disaster strikes, much of the damage could be avoided by deploying additional workers to fully clear the drainage system during the dry period prior to rains. The higher regular clearance costs for the Department of TPTC might be more than compensated for by reduced capital repair and maintenance cost of other agencies involved in things such as street cleaning. In any case, dry period clearance of settlement basins, channels and sewers is inadequate; workers and equipment are used then for road and bridge repair and construction.

1/ Etude et Avant-Projet des Reseaux d'Egouts, etc., op. cit.

2/ PPHC, Plan de Developpement de Port-au-Prince et de sa Region Metropolitaine. Phase III, Volume III: Infrastructure, UN Projet No. HAI/74//R40, CONADEP/TPTC/PADCO, Port-au-Prince, February 1976.

3/ Reconstruction of bridges destroyed on Route Delmas, Route de L'Aeroport, Ruelle Nazon (in progress), Ave. Charles Summer (in progress), repair of a fallen portion of Ave. Panamericaine, reconstruction of drainage works at Bois Patate plus a number of smaller repair works underway at the time of the World Bank mission visit. See Port-au-Prince City Orientation map for location of destroyed bridges.

3.45 There has also been some misconceived expenditure. In 1975, the Service de Genie Municipal bought two sewer-cleaning trucks for US\$60,000 which are useless for cleaning the gravel, boulders, and compressed solid waste that obstruct the system. Another example is the reconstruction of the drainage works at Bois Patate which were destroyed in October 1974 because the drainage channels under the street had become blocked. To attack the cause rather than the symptom of the problem, it would have been necessary to control upstream erosion and to have an effective clearing program. Some check dams and settlement basins were built upstream but, in the absence of regular clearing, the drainage channel again became obstructed. During a storm in November 1977, the upstream check dams and a bridge were damaged. The pattern of 1974 is repeating itself and costly investments are literally going down the drain. Other current reconstruction programs such as that of the bridge on Ruelle Nazon have similarly short life expectancies if the root cause of the problem is not addressed.

Solid Waste Collection and Disposal

3.46 Port-au-Prince currently produces an estimated 125,000 tons of solid waste per year, or about 340 tons per day. Eighty percent is produced by private households, 10% in urban agricultural produce markets and 10% by large-scale commercial and industrial enterprises. The figure is net of reusable materials, since marketable solid waste such as papers, cardboard, tin cans, boxes, bottles, crates, scrap metal, etc. is generally recycled through the numerous scavengers and scrap merchants to the small-scale manufacturing, commercial and construction sectors. Except for that part of waste that is fed to goats and pigs, this is the amount public agencies should collect and dispose of.

3.47 Two public agencies are responsible for solid waste collection and removal, i.e., the Service de Voirie et Transports and the Service de Controle, both of the Municipality and one, the Service de Genie Municipal of the DTPTC, is involved in practice through its drainage clearing activities (see Chapter IV). Actual collection of waste by these agencies is inadequate. The most recent estimate ^{1/} is that only about 35% of solid waste produced in the city, i.e., 45,000 tons p.a. is actually collected on a regular basis. About 85 tons a day are collected by the trucks of the Voirie, 15 tons by COVELSA, a private company under contract with the municipality and 25 tons by the Service de Genie Municipal from the drainage system. The remaining 80,000 tons accumulate in the streets, ravines and other unofficial dumps where waste is sometimes burned, sometimes used as a feeding ground for domestic animals and always used by rats. During the two rainy seasons most of the previously uncollected waste is deposited on downtown streets, in drainage canals and sewers or swept out to sea. The three public agencies combine their efforts then and most urban solid waste is finally removed.

3.48 The accumulation problem is critical in the central produce market of Croix des Bossales, located in a flat area between the downtown commercial

^{1/} PPHC, Plan de Developpement de Port-au-Prince, etc., Phase III, Vol. III: Infrastructure, op. cit.

district and the maritime port. It is poorly drained and every major rainfall sweeps tons of mud into the area, which is added to the agricultural waste produced by up to 50,000 small-scale traders and manufacturers and 200,000 daily customers. The Service de Controle used to assign only 11 workers and wheelbarrows to this zone. Mud and debris pile up quickly under the market and, for most of the year, are up to 1 m deep with market transactions taking place on top of the pile. A large-scale clean-up effort, undertaken in late summer 1977, was abandoned with the first rains in October and market conditions quickly reverted to their previous state. However, regular cleaning efforts were intensified during 1978 and the situation is now markedly better although not yet fully satisfactory.

3.49 Other critical areas of accumulation in the dry season are the ravines and streets of low-income high-density residential areas such as St. Martin, Portail St. Joseph, La Saline, Bel-Air, Fort National, Bolosse, Martissant, Sans Fil and Brooklyn where some 320,000 people live, or half the urban population. Due to the lack of access routes for trucks and wheelbarrows, the very limited number of laborers allocated to these zones and the lack of official concern about waste accumulation in them, it is not until the rain flushes the debris away that the neighborhoods become partially cleared of decomposing waste.

3.50 Until 1976, the collected waste was dumped on the downtown waterfront about 100 m from the maritime port and the central produce market. With the expansion of the port and related facilities, the dump was moved to the area in use for depositing eroded material cleared from the storm drainage system, 2 km further south on the waterfront. The waste was burned there until November 1977, when a new dump was opened at the northern extremity of the city, away from inhabited areas. This dump will remain in use until a waste processing plant becomes operational near the airport, reportedly in September 1978. ^{1/} The new dump is further away and the average number of daily round trips by the trucks of the municipality has been reduced by 30%. This loss in productivity may be temporary if the treatment plant, which is closer to the city, operates reliably. However, the southern end of the waterfront continues to be used by the Service de Genie Municipal, and the solid waste picked up through their drainage clearing activity is still burned at that location.

3.51 Several factors contribute to the inadequate level of regular waste collection, one of which may be insufficiency of workers and equipment (see Chapter IV for details). More importantly, management of existing resources leaves much to be desired. For example, on any given day, two to three of the twelve trucks in the fleet of the Voirie are inoperative due to mechanical

^{1/} According to the draft contract between the Government and SOFRANIE, the supplier of the plant, dated November 21, 1975, investment cost of the plant is around FF16 million. The final agreement with the actual purchase price could not be found. It is not sure that any economic or financial analysis for the new plant was ever made. Also, there is some doubt whether the technology used in the plant is sturdy and reliable enough to ensure fairly regular operations.

problems. Eight more dump trucks were recently purchased to increase the fleet, but they come from six different manufacturers which will not help the maintenance problem. ^{1/} On all six compressor trucks in the fleet, the compressor mechanism and the lift mechanism for loading trash with the 70 metal containers deposited throughout the city were not functioning at the time of the Bank mission. These trucks, because of their height, cannot be loaded by hand and thus carry only what can be piled into the rear loading bin or about 10% to 20% of their capacity.

3.52 Partial loading is also prevalent with the dump trucks. Two of the four mechanical loaders were also out of commission so that most trucks are loaded by hand, which is a slow process. In addition, the Voirie controls only the number of trips to the dump and not the amount of waste carried. Drivers are thus tempted to make the required number of trips with partial loads and to render "private" transport services thereafter, either collecting garbage from large commercial establishments and hotels or transporting sand and gravel from quarries to construction sites.

Liquid Waste Disposal

3.53 The major problem in this area is human waste disposal. Human waste production in the city is currently estimated at about 600 tons per day and is expected to rise to over 1,000 tons by 1986. Substantial amounts enter the stormwaters and some accumulate in the central market area. Most of it eventually ends up in the sea.

3.54 A census undertaken by the Metropolitan Water Authority (Centrale Autonome Metropolitaine d'Eau Potable-CAMEP) in 1966 and 1967 indicated that the city had 34,000 latrines, 13,000 hygienic toilets and 50 septic tanks. A PPHC survey of 1976 estimated that the number of pit latrines had risen to about 58,000, an average of 11 persons for each facility, ^{2/} with considerable variation around the average figure. A significant proportion of the low-income population was shown to have practically no facilities whatsoever. Most of these, about 60,000 persons, reside along the coastline to the north of the maritime port in the communities La Saline, Cite Croix Rouge, Cite Simone, Cite Jean-Claude, Brooklyn and Boston.

3.55 These marshland areas are impractical for low-cost pit latrines because of the high water table and the constant flooding during the rains. Reinforced pit latrines, lined to a depth of one to two meters with concrete blocks, seem to have proved successful, but the high cost of construction has kept the number low. The government and a private voluntary organization have experimented with different kinds of communal waste disposal facilities above ground level. These were poorly maintained and became inoperative a few

^{1/} The Director of the Voirie had no say in the selection of the equipment.

^{2/} Plan de Developpement de Port-au-Prince, etc., Phase III, Vol. III: Infrastructure, op. cit.

months after construction. Most of the population now uses the empty fields and drainage canals that surround the area.

3.56 Latrines and pits built across the rest of the city by property-owners and on leased land tend to be well-maintained and relatively clean, even when up to 30 people share one facility. However, in areas with densities of 1,000 or more, it is not possible to pursue the usual habit of covering a pit which has become full and digging another nearby. The high price of latrine cleaning charged by the Division d'Hygiene Publique, US\$25 to US\$30, precludes purchase of this service by the majority of the population and cleaning sometimes takes place during the rainy seasons when ground water pressure forces sludge out of pits and into the city streets. 1/

3.57 This "disposal" system creates serious health hazards. Human waste infiltrates the exposed potable water pipes that run along the streets and contaminates the distribution system. Homes and pits built above water-supply sources also contaminate the system, such as the Plaisance-Cerisier Source in Petionville which supplies 7% of urban water. The non-aedificandi areas established around each source have not been respected and large homes are built in them without controls on the type of waste disposal facilities required to minimize pollution. Finally, to the extent that human waste enters the flood waters (see above), it creates contamination risks in the central fruit and vegetable market during the rainy season.

3.58 Contamination of the water system is increased by domestic waste water other than human waste. High- and low-income families dump this water into the streets or drainage ravines and canals and this is the primary source of contamination during the dry seasons, mostly in high-income areas. The problem is less acute in low-income areas, since the quantity of such wastewater is very low because of the inadequacy of the water supply system and such quantities as are dumped are absorbed relatively quickly into the ground. The major exception is the coastal marsh area identified previously, where drainage is poor and contaminated water stagnates on the ground, outside as well as inside many homes. As noted, some 60,000 people live under these conditions.

3.59 Only a relatively small number of manufacturing establishments are heavy wastewater producers. The most important are sugar refining and the manufacture of soap and detergents, vegetable oils, textiles, leather and cigarettes. PADCO estimated current wastewater production at 2,000 m³ per day, of which HASCO the sugar refinery, contributes 60%. Except for the cigarette factory and one or two smaller enterprises, which have individual treatment facilities, industrial wastewater is dumped directly into drainage ravines and flows to the sea. The proximity of most of these industries to drainage canals and to the coast minimizes the pollution effect upon the city itself but increases the pollution problem in the bay.

1/ PPHC, op.cit., Phase II, Vol IV, page 31.

Environmental Management - Improvement Proposals

3.60 Several studies addressing the problems described in this section were made in the last few years. Drainage and sewage problems were addressed in an IDB-sponsored study in 1972 1/ which identified solving the erosion problem as a precondition for all downstream drainage works and underlined the importance of adequate system maintenance and clearance operations. This was followed in 1974 and 1975 by work on a detailed master plan for the city's drainage system and on project documents for an IDB drainage improvement loan which, however, did not address the erosion issue. In the absence of an overall program on the mountain, much of the work undertaken by the government on the basis of the plan has already been damaged or rendered ineffective. Solid waste disposal problems were first analyzed and recommendations for improvements made by PAHO in 1971 2/ but were not implemented. A second analysis was made by the PPHC project in 1976, 3/ which recommended a series of actions to be undertaken over a 10-year period. The cost of the program implied only a small increase over present rates of expenditure, while most of the proposed improvements were in management and more efficient use of existing resources (see Chapter IV).

3.61 The PPHC project also made a further analysis of the erosion and drainage problems. 4/ It noted that most of the studies required for an erosion control program have been carried out and that the legal basis to implement the program exists. The basic problem is managerial, i.e., recommendations are not followed and laws are not enforced. Fundamentally, the Immediate Action Report argues that a natural regeneration period for the Morne l'Hopital will significantly reduce runoff. This would require a series of actions on the mountain such as elimination of inappropriate grazing and crop-raising practices, drainage and erosion control along major paved and unpaved roads, a detailed zoning plan, control of subdivision and land-leasing practices, special building standards, elimination of the sand quarry, reforestation and revegetation on critically eroded surfaces, etc. For the lower segments of the drainage system, the PPHC work completed the IDB master plan

1/ Etude et Avant-Projets des Reseaux d'Egouts etc., op. cit.

2/ La Voirie Urbaine a Port-au-Prince, Republique de Haiti. J.F. Haddad, PAHO, Reference HAI-300, Port-au-Prince, 1971.

3/ Phase III, Vol. III: Infrastructure, op. cit.

4/ See for erosion issues: Projets d'Actions Immmediates, No. 1: Developpement Physique du Morne l'Hopital. Plan de Developpement de Port-au-Prince et de sa Region Metropolitaine, UN Project No. HAI/74R 40, CONADEP/DTPTC/PADCO, Port-au-Prince, February 1976. See for the drainage system analysis: Plan de Developpement de Port-au-Prince etc., Phase III, Vol. III, op. cit.

by including a full clearing of the existing system, dredging of the harbor and extension of the master plan to areas of the city not covered by it but likely to undergo rapid urbanization, i.e., Carrefour and the northern coastal marshland area.

3.62 Partly on the basis of these studies, the IDB has approved a major drainage improvement project in December 1978 ^{1/} for a total cost of about US\$45.8 million, including land purchases. The DTPTC will implement the project over a period of five years starting in mid-1979 through a project implementation unit that has already been created. The four major project components are briefly described in the following paragraphs.

3.63 The erosion control component of the project picks up most of the recommendations made by the PPHC study at a direct cost of US\$4.35 million, excluding engineering and administration, contingencies, cost escalation, land acquisition, and financing charges. It includes reforestation, terracing and the construction of retaining walls on the mountain, the stabilization of some 28 km of urban roads in the lower reaches of the mountain, and drainage improvements on the Boutilliers/Sanatorium road and on the Avenue Panamericaine. It also includes construction of new settlement basins and check dams including access roads for maintenance.

3.64 The garbage collection and disposal component is expected to cost some US\$3.55 million ^{2/} and will rely on a mixed system of house-to-house pick-up and collective pick-up points with large metal containers serviced by collection crews. The component includes the provision of equipment maintenance facilities and the paving of the collective container depots and some market areas. It does not depend on the operation of the garbage processing plant; an area 20 km north of the city has been chosen for a sanitary landfill. The component includes the creation of a unified solid waste collection agency for the metropolitan area that would absorb the waste collection agencies of the municipalities of Port-au-Prince and Petionville and the street cleaning services of the Urban Engineering Office of the DTPTC.

3.65 Rehabilitation of the existing drainage system will be done at a direct cost of some US\$7.1 million. ^{2/} It will involve complete clearing of the existing system and the repair of the existing channels and pipes, the removal of bottlenecks to increase flow capacity, such as exist under bridges and in culverts, and for a number of pedestrian crossings. The component also includes dredging the bay at the mouths of the drainage channels, involving the removal of an estimated 110,000 m³ of material.

3.66 The fourth and final component is an expansion of the system, involving work on eight additional drainage channels at a direct cost of

^{1/} Port-au-Prince Storm Drainage Project, HA-0019, IDB document PR-905, approved on Dec. 7, 1978.

^{2/} Cost estimate on the same basis as defined for the erosion control component.

US\$7.235 million. 1/ Three of these channels will extend the system to the east in the direction of Carrefour and will affect the areas of Savane Sale and Martissant. An extension to Carrefour itself is not presently foreseen. Similarly, the northern marshland areas such as Brooklyn and Boston are not included for lack of a technical solution to their drainage problem. Funds to study the problems and experiment with solutions have, however, been included. If the work is successfully concluded, it could also provide the basis for badly needed drainage works in some provincial towns with the same problem (see below).

3.67 The project has two other noteworthy features. As presently defined, construction will be very labor-intensive, with wage payments expected to amount to some 57% of the direct cost for some 17,000 man-years of employment over the five-year implementation period. Secondly, the project includes a special fund of the Central Bank for maintenance of the works for a period of five years after completion with project financing of a declining share of expenditures foreseen. Some 10 years should, therefore, be available for strengthening the institutions involved in drainage and garbage removal. Altogether, if properly implemented, the project should solve the major part of the city's environmental sanitation problems.

3.68 The project does not, however, deal with human waste disposal. Costs and technical problems make it unlikely that a waterborne sewerage system in the city is an appropriate solution in the near future despite the critical public health problems posed by the present situation. From a preliminary assessment of the costs of sanitary sewer facilities made in 1972 for IDB and CONADEP, 2/ it can be estimated that the present-day cost of a primary and secondary system for the city would amount to some US\$80-90 million.

3.69 Several other factors compromise the construction of a conventional sewerage system. There is, and will continue to be for the foreseeable future, insufficient water consumption to clear a sewer system adequately. Only about 30,000 private water connections are scattered about the city today and, by 1986, there are unlikely to be more than 60,000 connections, with no more than 40,000 homes likely to be equipped with conventional toilet facilities.3/ It is also unlikely that hydrological resources will permit 24-hour water services. Also, in the absence of an enforced urban development plan, it is presently also close to impossible to estimate future wastewater flows and pressures and to determine the layout and capacity of a sewer system. Under these conditions, the best that can be done now is to reserve the necessary space for possible future construction of a sewerage system in newly developing urban areas.

1/ Cost estimate on the same basis as defined for the erosion control component.

2/ Etude de Avant - Project des Reseaux d'Egouts, etc., op. cit.

3/ PPHC, op. cit., Phase II, Vol. IV, Section 15.1 and World Bank mission estimates.

3.70 The alternative to a modern sewerage system is to improve the effectiveness of the current disposal methods. In line with proposals made by PPHC in 1976, 1/ this might involve:

- (a) the creation of a public service for biannual cleaning of pit latrines and cesspools in the city, which could probably be organized to be financially self-sustaining;
- (b) grant assistance in the form of concrete blocks for constructing latrines to the low-income population living under the difficult conditions of the northern marshland areas of the city; 2/ and
- (c) a comprehensive study to determine the absorptive capacity of the soils underlying the city, establish standards of density for latrines, construction standards for cesspools and septic tanks in potable watersheds, construction standards for domestic wastewater disposal, evaluate the need and feasibility of industrial wastewater, sewerage and treatment facilities, and identify the scale and importance of coast-line water pollution caused by current practices.

The estimated study and investment costs of these activities amounted to US\$950,000 with an annual operating expense of about US\$80,000. The present operating budget for latrine clearance is US\$15,000.

C. WATER - PORT-AU-PRINCE

Hydrological Resources

3.71 Water resources in the Port-au-Prince region have never been fully assessed. Such reports as exist indicate that resources in the Cul-de-Sac plain, to the north of the city, could provide 3 to 5 m³/sec. continuously. 3/ Another 4.3 m³/sec. could be obtained by building a dam on the Riviere Grise to the east of the city, for an estimated total availability of 7 to 9 m³/sec. This estimate excludes resources which might be available in the mountains to the south, especially in the Riviere Froide, and to the west between Carrefour and the Riviere Momance. The absence of a full inventory is serious in view of general estimates of possible future

1/ Op. cit.

2/ This would bring down the user cost of pit latrine construction to that in other parts of the city.

3/ Plan de Developpement de Port-au-Prince et de sa Region Metropolitaine, Phase III, Vol. III, Infrastructure, op. cit.

demands for water. Irrigation of the Cul-de-Sac plain could require some 13 to 18 m³/sec. Potable water requirements for the regional population, now about 0.92 m³/sec., might be about 2.7 m³/sec. by 1986 and 5.2 m³/sec. by the year 2000. Making allowances for water recycling, the minimum future requirements might be about 15 m³/sec. or about twice the currently estimated resources.

3.72 Available resources have declined during the last decades because deforestation and erosion have reduced the water absorption capacity of major watersheds. Two sources on the Morne l'Hopital provided 338 l/sec in 1939, 171 l/sec. by 1957 and are now estimated to provide only about 70 l/sec. ^{1/} Rainfall patterns did not change significantly during the period. Faced with declining source flows on the Morne, CAMEP began pumping an additional 160 l/sec out of wells in the Cul-de-Sac plain in 1976. The water is on the margin of potability because of salt water infiltration and while this may be due to excessive pumping in a period between serious droughts, it may also reflect an overestimate of resources available in the plain. In any case, a resource inventory is required, unnecessary losses in the potable water system of the city must be reduced, and watershed protection and soil conservation must be undertaken.

Water Quality

3.73 At present, an average of about 900 l/sec or about 120 l/c/d enter the city's water distribution. Two hundred twenty litres/sec. are drawn from increasingly saline wells in the plain, 40 l/sec from two sources in the western part of the city and the rest from sources on Morne l'Hopital. Most of the water is very alkaline and contains a high percentage of carbonic acid. As a result calcium deposits accumulate in water mains, flow capacities are reduced and maintenance and replacement costs are high. In some areas, the service life of main pipes is only eight years. Water softening at the source has been used from time to time but never over an extended period.

3.74 As previously mentioned, there is also serious contamination from waste water. Seven percent of urban water comes from a source that is contaminated by pits and cesspools in residential areas above it. Efforts to assure potability at the sources, like the chlorination facilities that were installed, are negated by the combined effects of leaks in pipes especially those lying on street surfaces, intermittent pressure, the use of streets for domestic wastewater disposal and frequent flooding by overflows from the storm drainage system containing solid and human waste material. This contamination problem is most acute in the central portions of the city.

^{1/} Ibid.

System Losses

3.75 About 50% of water input is lost in the system. 1/ Most of the loss is due to breaks and leaks in pipes but much of it also occurs because connections to reservoirs in homes and establishments are not equipped with automatic shut-off valves, or sometimes any valves at all. When such reservoirs, including swimming pools, are full they overflow into the streets. Since there are no metering devices, no enforced penalties for not having valves and the water tariff is on a flat rate basis, there is no incentive to subscribers to invest in appropriate valves. It is estimated that control mechanisms at private connections would reduce losses to a more reasonable 30% to 35%.

3.76 Individual reservoirs are installed because distribution and pressure of water flows are irregular. The irregularities arise from heavy demand fluctuations, irregular rainfall, limited public storage capacity and high distribution losses. Even if losses at private connections were eliminated, the system would still provide less than 24-hour service. Initial hopes that pumping from wells in the Cul-de-Sac plain might lead to a more regular service level are unlikely to materialize because of the questionable quality of the water and the high costs of pumping.

Distribution Methods

3.77 The primary distribution system works with gravity or pumps and covers most of the urban area. The secondary system consists of about 30,000 legal and clandestine private connections, about 40 public fountains and less than 100 fire hydrants or less than one per 20 ha of urbanized area.

3.78 All types of final outlets are used beyond their initial intent. Tanker trucks draw water from the hydrants and transport it to homes and industrial and commercial establishments without connections or without regular service. Much of this water is transported to peripheral areas not yet served by pipes. Many connected families give water to their low-income unconnected neighbors and many others, especially in high-density and low-income areas, sell water by the bucket. The buyers are families purchasing for their own use plus some 14,000 female water sellers who distribute the commodity to poorer families. 2/ The same happens at public fountains. Breaks and leaks in pipes are also an important source of water. The importance of these various distribution methods in 1976 is listed in Table III-4. The table clearly shows that 23% of the population obtain 75% of urban water and that 47% obtain 11% of water. Seventy five

1/ Rapport de Diagnostic (Phase I) pour la CAMEP, OPS/OMS, Port-au-Prince, June 15, 1977.

2/ Families in Port-au-Prince etc., op. cit.

Table III-4

STRUCTURE OF PORT-AU-PRINCE RESIDENTIAL WATER DISTRIBUTION,^{1/}
FROM THE CAMEP SYSTEM, 1976

<u>Supply Source</u>	<u>Number of Consumers</u>	<u>% of Consumers</u>	<u>Daily per Caput Consumption (litres)</u>	<u>Total Daily Consumption (million litres)</u>	<u>% of Consumption</u>
Private Connections (legal and illegal)	150,000	23%	156	23.4	75%
Public Fountains (Free)	55,000	9%	15	0.8	3%
From another's private connection (Free)	95,000	15%	32	3.0	10%
From leaks and breaks	40,000	6%	18	0.7	2%
Purchase from intermediaries	300,000	47%	11	3.3	11%
<u>Total (Average)</u>	<u>640,000</u>	<u>100%</u>	<u>49</u>	<u>31.2</u>	<u>100%</u>

Source: Plan de Développement de Port-au-Prince etc., Phase III, Vol. III: Infrastructure, op.cit.

^{1/} Truck deliveries drawn from the CAMEP system are not included. In 1976, they were estimated to represent less than 2% of total consumption; more recent estimates are not available. The table also excludes CAMPE supplies to non-residential customers, about 5% of total supply.

percent of the population consume less than 30 l/caput/day. 1/ The table does not include several large-scale industrial and commercial water users like the sugar refinery, ice plants, beverage producers, etc., which have their own wells on the periphery of the city and either pipe or truck it to their plants.

Water Prices

3.79 Water users legally connected to the piped system pay a fixed rate related to the assessed value of the house or to the size of the industrial or commercial establishment in question. There are no water meters to link tariffs to consumption. Depending on the assessments made and the estimated consumption volume, rates vary from a low of US\$0.03/m³ to a high of US\$0.11/m³. The price for water from other methods of distribution depends entirely on supply and demand conditions which vary from season to season, from day to day and from neighborhood to neighborhood. For example, charges for truck delivery vary between US\$3.00 and US\$6.00 per m³ depending on availability and distance. For lowest income families, the rates range from a minimum of US\$1.10/m³ to a high of US\$5.60/m³ during the dry season, with an average of about US\$2.30/m³. During drought periods such as 1975 and 1977, prices can be as high as US\$10/m³ to US\$20/m³ for several months at a time. These high price levels explain the very low per caput consumption rates indicated in the previous table.

3.80 Artificial scarcities exacerbate an already bad situation. Truckers have been known to break pipes to create demand for transported water over the extended periods required to locate the breaks and repair them. The valve operators of CAMEP can be "persuaded" to open a flow to one part of the area under their jurisdiction and close it to another thus creating a scarcity and increasing the asking prices of water sellers. Connection and repair crews can be used to secure a clandestine connection or to cut off another family's legal or illegal connection. Even public fountains do not escape deliberate destruction and, in situations of acute scarcity, access to them may be subject to a fee levied by private individuals.

3.81 As a result of this situation, the private market for water in the city, excluding the trucking operations, can be estimated at US\$2.8 million a year. 2/ An estimated US\$930,000 accrues to the 14,000 small-scale water sellers, who obtain an average income of US\$0.20 a day for their services. The remaining US\$1.87 million is presumed to accrue to some 2,000 individuals, who obtain a gross annual revenue of US\$500 to US\$2,000 each. The proportion of this revenue used to pay CAMEP workers is unknown, though the amount which they might collectively have to pay for legal connections would be less than US\$100,000. CAMEP's revenues from water sales amounted to little more than US\$650,000 in 1976. 3/

1/ See map on Water Consumption and Land Prices in Port-Au-Prince for geographical distribution of different water consumption levels in the city.

2/ Plan de Developpement de Port-au-Prince, Phase III, Vol. III: Infra-structure, op. cit.

3/ Rapport de Diagnostic (Phase I) pour la CAMEP, op. cit.

3.82 These operations of the water market have serious economic and physical effects on the low-income population. Despite the low water consumption levels of unconnected families shown in Table III-4, significant proportions of disposable income have to be spent on water. At income levels of US\$15/month per family, 20% to 25% of income have to be spent on water and, at levels of US\$40/month, the proportion remains as high as 8% to 12%. These figures help to explain why relatively little can be spent on housing and why savings for housing investments are difficult to generate. They also explain why water from broken pipes, water flowing in the drainage system and street-runoff are widely used for certain purposes. This leads to increased health risks and the associated costs of curative health services. 1/

Improvement Proposals

3.83 In 1976, the PPHC project made the first comprehensive analysis of water needs of the urban population. 2/ For a target consumption of 30 l/d/c for the low-income population and 175 l/d/c for the high-income population, estimated source flows would have to increase to 1,850 l/second by 1986, i.e., double from present levels, and system losses would have to be reduced to 35%. It was recommended to survey available water resources prior to any major extensions of the distribution system, and it was felt that at least 320 public fountains would have to be built to provide 30 l/d/c to the low-income population. With a design density of one fountain for three ha of residential land, this would not significantly affect the employment and incomes of small-scale water sellers in the city, while reducing the cost of water to the low-income consumers by 60% to 70%.

3.84 Present chances that these fountains will be built are small. CAMEP has included only 50 fountains in its development plan and only 10 fountains were added, mostly in peripheral areas, to the previous total of 30 during the US\$7.4 million systems extension recently completed with an IDB loan. Construction of 320 fountains to serve over 75% of the population would have absorbed only 5% of the capital expenditures of the IDB loan. As it is, only US\$8,000 were spent on fountains, and the bulk of the expenditures only served to provide more water to those already enjoying a disproportionate share of consumption. In addition, PAHO representatives in Haiti appear unenthusiastic about large-scale building of public fountains. The risks of contamination are said to be too high, even though it is agreed in principle that the high family expenditures for water and the resulting use of street runoff lead to equally serious hazards and that piped water in central areas is sufficiently polluted for additional contamination at fountains to be marginal. Whatever the rationale, the approaches and actions of PAHO and IDB have been instrumental in maintaining the current structure of consumption.

1/ Water scarcity occasionally also increases the cost of concrete block manufacture by as much as 10%.

2/ Plan de Developpement de Port-au-Prince, etc., Phase III, Vol. III, Infrastructure, op. cit.

3.85 In 1977, engineering studies were completed by an IDB consultant for further extension of the system in the areas of Petionville, Delmas and Carrefour for the period up to 1992. The project envisaged pumping of water from the Cul-de-Sac plain to reservoirs above these areas 1/ and flow-back by gravity. The estimated capital cost of the project is about US\$27.5 million by 1992, US\$19 million arising between now and 1982. This program is again aimed essentially at the highest income groups of the city. It does call for construction of 10 more fountains but in areas which are not heavily populated by low-income families. Its implementation might nearly double the 1977/78 budget of CAMEP by 1982, if depreciation and debt service are accounted for. Given the current fiscal and managerial condition of CAMEP and given also the salinity problems with water from the plain and the fact that sources up in the mountains might exist and would obviate the need for the pumping stations, the initial design of this project can be questioned.

3.86 Partly in the light of these facts, IDB has decided to postpone further loan activities for the planned extension of the system to allow time for completion of certain actions. These include:

- (a) reform of the management and salary structure, which has been implemented recently;
- (b) a new tariff structure, which is approved in principle but had not yet been implemented at the end of 1978; and
- (c) the installation of water meters, centralized valve control, a hydrological study for the region 2/ and subsequent preparation of a long-term master plan for water resources development and distribution up to the year 2000.

3.87 In line with this decision, the PAHO consultant financed by the IDB to assist in the financial, technical and managerial upgrading of the water authority has requested a special allocation of US\$275,000 from the President of the Republic to enable him to do the following:

- (a) a complete survey of existing water users, including private connections, truck transporters and users of wells;
- (b) updating of the cadastre, at least for those properties with connections;

1/ Etude d'un Systeme d'Eau Potable pour Petionville, Nouveau Port-au-Prince, Carrefour, Rapport No. III, Premiere Etape, Plan de Developpement et Faisabilite, EBA Engineering Consultants Ltd., Edmonton, Alberta, March 31, 1977.

2/ IDB expected to receive at the beginning of 1978 a request from CAMEP for the financing of a hydrological survey which IDB considers essential before it finances a further extension of the system. By July 1978, this request had not been received. IDB is ready to finance the survey and the master plan if asked to do so.

- (c) updating of plans and drawings of the existing system (CAMEP does not have up-to-date plans for the system it operates);
- (d) purchase, installation and testing of 400 to 600 water meters;
- (e) a feasibility study for centralized control of distribution valves to eliminate the independent practices of valve operators; and
- (f) training of personnel and purchase of basic equipment for control of leaks and other system losses.

3.88 With expected Presidential approval, these steps could be implemented immediately. Wider-ranging actions are also envisaged dealing with management and personnel upgrading, and overhaul of the tariff structure to put CAMEP in a financially self-sustaining position. 1/ In this regard, the PAHO consultant has estimated that an average charge of US\$7 per month for all present connections would provide a revenue of US\$2.5 million. 2/ The PAHO consultant has also set himself a goal of 500 public fountains to be built over the next 10 years. While the capital cost for these facilities could probably be borne by CAMEP's own budget, if the planned tariff changes are implemented, it is likely that it would take several years before CAMEP could be upgraded to manage such a large number of fountains. Construction probably would and should, therefore, not be started until then.

3.89 Other, more difficult, actions are envisaged with respect to third party sales. These include the identification of well-owners, who would be metered and charged 25% of water use rates, 3/ the identification of truckers who would be licensed and inspected on a three-month cycle, would be required to purchase at designated points at regular metered rates and would be subject to sales price control and, finally, the issuance of temporary permits for third party sales by private connected families in low-income areas. It is also intended to establish a redistributive tariff structure which would use cross-subsidization to lower connection and use costs in low-income areas and might lead to a larger number of private sellers and lower prices for low-income families without connections.

1/ See Chapter IV for a discussion of CAMEP.

2/ Present rates for residential construction are US\$5 per month for homes of an assessed value exceeding US\$5,000 and US\$3 per month for houses valued more than at US\$1,000 to US\$5,000.

3/ In principle, all water is public property.

D. TRANSPORT - PORT-AU-PRINCE

Road Network 1/

3.90 Port-au-Prince is equipped with 60 km of major arteries which are all paved but in many cases do not have shoulders or sidewalks, and pedestrians and vehicles share the same rights of way. There are also 335 km of secondary streets of which about 120 km are paved, as well as privately-built access roads and driveways, usually unpaved, the total length of which is unknown. 2/ The two major problems with this network are inefficient use of the facilities and inadequate access to high-density/low-income neighborhoods.

3.91 Although some major and minor arteries are underdesigned for the volume of pedestrian and vehicle traffic that they now carry, major traffic delays during peak hours are caused more by inefficient use of existing facilities. The random stopping habits of public transport vehicles, the absence of shoulders and sidewalks, bad intersection designs, bad placement of traffic lights and road signs, the absence of road surface markings, etc., all contribute to delays. Much improvement in traffic flow could be obtained by more effective use of the existing network.

3.92 While many areas are reasonably well served by roads, narrow and unpaved pathways severely restrict vehicle access to the high-density neighborhoods where the low-income residents are concentrated. This seriously inhibits the delivery of goods and public services like fire protection, latrine cleaning, solid waste removal, stormwater drainage cleaning, delivery of construction materials, etc.

Transport Modes

3.93 Table III-5 shows the modes used for work-related passenger traffic in the city in 1975 and a projection for 1986. In 1975, almost 90% of work-related trips were done on foot, partly because of the low-income of much of the population relative to the cost of motorized transport. By 1986, walking will remain the dominant transport mode, but it is estimated that travel distances for low-income families will rise by 43%. This estimate assumes that the downtown market area will remain the dominant employment center for the city and that low-income housing programs will tend to be located on the periphery of the city to the north and west. The estimate, especially of the travel distances, will not hold if the market is decentralized, which now appears probable.

1/ See Port-au-Prince City Orientation map for major roads, and proposed alignments of possible future roads.

2/ Plan de Developpement de Port-au-Prince et de sa Region Metropolitaine, op. cit. Volume IV, Transports, February 1976.

Table III-5: ESTIMATED STRUCTURE OF DAILY TRANSPORTATION DEMAND FOR WORK-RELATED TRIPS IN PORT-AU-PRINCE
1975 and 1986

Mode	1975					1986				
	Number of Trips	%	Average One-Way Distance Per Trip	Total Daily Person kms	%	Number of Trips	%	Average One-Way Distance Per Trip	Total Daily Person kms	%
On-foot	570,000	89%	2.3 km	1,311,000	81%	929,000	87%	3.3 km	3,065,700	83%
Public Transport	54,000	8%	4.0 km	216,000	13%	118,000	11%	4.1 km	483,800	13%
Other Vehicles	16,000	3%	6.0 km	96,000	6%	23,000	2%	6.1 km	140,300	4%
Total	640,000	100%	2.7 km	1,623,000	100%	1,070,000	100%	3.4 km	3,690,000	100%

Source: Plan de Développement de Port-au-Prince etc., op. cit., Vol. IV: Transports.

3.94 Motorized passenger traffic only accounted for 11% of the number of trips and 19% of the passenger kilometers with only slight increases in the percentages expected by 1986. Unfortunately, there is no equivalent analysis for goods traffic within the city. What is known is that, in 1975, a total of about 560,000 tons of goods moved through the city, of which about 270,000 inside Port-au-Prince, 165,000 tons to and 125,000 tons from other destinations in Haiti. ^{1/} Much of this was transit traffic to and from the port.

3.95 The composition and development of the stock of motorized vehicles in the city is shown in Table III-6. Most vehicles can be and are used for the transport of both passengers and goods. The figures are also affected by year to year changes in vehicle classification and place of registration. Buses may become classified as trucks, and minibuses, including small station wagons, may be classified as jeeps or cars and vice versa. Procedures now appear to have stabilized and the 1975 figures appear reasonably accurate.

3.96 Although complete statistics are not available for years after 1975, it appears that the upsurge in car registrations since 1974 has continued at a rate of about .25% per annum. This alone would put the 1977 vehicle fleet in the city at about 28,000, of which 19,000 would be cars. Recent high rates of growth of the urban economy, repatriation of Haitian savings and citizens from abroad, rapid increases in the number of foreign personnel and the de facto public policy of not restraining vehicle imports, have all contributed to this increase in vehicle investments. The import tax on vehicles for private use is relatively high, especially for larger cars with high fuel consumption rates, but it is estimated that 60% to 80% of all private vehicles are imported free of taxes. Both expatriate personnel and public agencies do not pay import taxes on cars, but there is also some political difficulty in restraining consumption habits of the rich.

3.97 An estimate of the increase in the number of vehicles in the Port-au-Prince region for the period 1976-1986 is given in Table III-7. According to the estimate, the vehicle stock in Port-au-Prince in 1986 would be about double that shown for 1975. This conservative-looking estimate assumes, inter alia, that import taxes will remain the same as today but will be enforced, that fuel costs will remain stable, that efforts will be made to maximize existing road capacity and that the repatriation of Haitians and their foreign savings will slow down. As for traffic volumes, these are estimated to rise by about 4.5% per annum. Present vehicle flows on the main arteries range between 10,000 and 25,000 per day, most of which are public transport vehicles travelling fixed routes many times.

^{1/} Louis Berger International, Inc.; National Transport Study, Final Report, Volume III: Sector Analysis by Modes, Port-au-Prince, Aug. 1977, Table 7-7.

Table III-6: INCREASE IN MOTORIZED VEHICLES IN PORT AU PRINCE, 1971-1975

<u>Type</u>	<u>Y e a r</u>					<u>Average Annual Rate of Increase</u> 1971-1975
	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	
Trucks	463	532	781	439	1,332	30%
Buses	140	23	88	79	135	--
Minibuses	480	1,150	1,070	2,070	2,290	48%
Jeeps	793	911	1,053	994	1,338	14%
Cars	8,600	8,350	9,060	9,703	12,310	9%
Total (Port au Prince)	10,476	10,966	12,052	13,285	17,405	13.5%
Total (Haiti)	14,919	16,160	18,030	20,396	23,350	11.9%

Source: Plan de Développement de Port-au-Prince etc., op.cit., Vol. IV, Transports.

Table III-7: FORECAST INCREASE IN VEHICLES IN PORT-AU-PRINCE
1975-1986

<u>Type</u>	<u>Year</u>		<u>Annual Average Rate of Increase</u>
	<u>1975</u>	<u>1986</u>	
Commercial-Goods	935	1,500	4.6%
Commercial-Passengers	3,270	6,700	6.7%
Private	12,000	23,800	6.4%
Others	1,200	2,000	5.0%
Total (Average)	17,405	34,000	6.3%

Source: Plan de Developpement de Port-au-Prince et de sa Region
Metropolitaine, op. cit. Rapport Sommaire Final, Vol. I
and II, August 1976.

3.98 There are also some non-motorized modes of goods transport in the city. About 1,000 man-powered and locally manufactured wagons in the city are used for the transport of agricultural produce between the central and peripheral markets and warehouses and for the transport of construction materials. Animal-powered wagons are rare inside the city and are reserved for delivery of sugar cane from rural areas to the refinery on the north side of the town. Some of the rural produce arriving in the city is brought in by small horses and donkeys or by the 50,000 sales women and their hired male porters. The latter also engage in vehicle loading and unloading and independent intra- and inter-market transport and might number from 30,000 to 50,000, depending on the intensity of daily or seasonal market activity. 1/

Public Transport

3.99 Some 1,500 buses and minibuses plying about 60 km of streets on seven well-defined routes provide the basic public transport service in the city. In 1975, nearly half of these (47%) were diesel station-wagons, having a seat capacity of nine passengers each. One-third were diesel minibuses with seat capacities of 12 to 18, and another 15% minibuses with an average capacity of 22 seats. Buses comprise 5% of the fleet with seating capacities of 30 to 50. The vehicle fleet has recently grown at an average of 15% to 20% a year. 2/ No information is available on the socioeconomic profile of the users nor on the capacity utilization of these vehicles.

1/ Same source as Table III-7.

2/ Ibid.

3.100 Although the vehicles ply fixed routes, there are no predetermined stops. Stops to pick up customers may be as close together as 25 to 50 m in the downtown area. Driver resistance has thwarted efforts to regulate random stopping practices because almost all drivers rent the vehicles, and their incomes are a function of the number of passengers they can pick up. Fixed-route transport is complemented by about 1,200 taxis that provide service mostly in areas not well served by the fixed-route vehicles.

3.101 Rates for fixed-route public transport vehicles vary between US\$0.09 and \$0.14 per ride during the day and between US\$0.18 and US\$0.28 at night. Rates vary from route to route and are regulated by the Government. Taxi fares are US\$0.18 during the day and US\$0.36 at night. These rates are high, relative to incomes in the city, 1/ and it is estimated that no more than 8% of daily urban work trips and 13% of daily passenger miles are made by these modes.

The Central Area

3.102 The Central area is the origin or destination of most work and shopping trips in the city. About 54% of all urban employment is located there and the residential population is close to 300,000. The major concentration of traders, manufacturers and customers is in the central market area, which is part of the downtown commercial district. About 250,000 people produce, buy and sell there each day on a surface of about 6.5 ha. 2/

3.103 Until about 1974, the market expanded until it covered parts of the city's garbage dump and spilled into main thoroughfares. Since then, it has been constrained both by police action and by the port expansion and port-related activities which have led to walling-off the northern and southern side of the market. The truck and bus terminal has closed and this has forced the vehicles into the market's open spaces. This has led to proposals to build truck terminals on the periphery of the city and to close the central zone to them. This implies the decentralization of the market.

3.104 The location of market activities is the central urban transport question for the low-income majority. The conventional separation between work-place and residence has only limited applicability in Port-au-Prince. 3/ Most low-income families are self-employed in trade and manufacturing at very small scales of operation and they mostly use their homes for goods storage

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- 1/ One trip daily at the lowest fare of US\$0.09 would absorb 14% of the income of the person at the relative poverty cut-off level of US\$234 p.a. in Port-au-Prince. Sixty-five percent of the population live at or below this level. (See Chapter I.)
- 2/ Plan de Developpement de Port-au-Prince, etc., op. cit., Projet d'Action Immediate No. 2/3: Renovation du Centre de la Capitale, undated.
- 3/ Families in Port-au-Prince, etc., op. cit.

and transformation. Trips are made to purchase inputs and to sell outputs, almost all to and from the central market and the immediately surrounding downtown area. Time and money costs of travel to and from the market area thus have an important effect on household incomes. In a pedestrian society, travel costs are measured mostly in time lost for purchasing, transforming and selling activities. Such costs may appear small in absolute terms, but they are large in relative terms for the majority of families earning less than US\$40 a month. To minimize these costs, it is essential that places of purchase and sale, the place of manufacturing activity and the residence are as close together as possible.

3.105 Any efforts to decentralize the market to peripheral locations will then have significant effects on this intimate spatial relationship which underlies the intensive demand for residential space around the center and the high densities that were discussed in the shelter section of this report. Important effects will be felt on current household incomes and on the spatial pattern of land and housing demand. By the same token, the location of market activities will affect both the siting and pricing of low-income shelter projects. A family willing to pay US\$5 a month for a location close to the market may not be willing to pay the same at the periphery, where the higher travel costs to and from the market would reduce income. Efforts in low-income housing must therefore be integrated with parallel efforts of market reorganization, or they must account in their price structure for increased transport costs.

Improvement Proposals

3.106 In the framework of the development plan for the Port-au-Prince metropolitan area, PPHC studied urban transport questions and made a number of improvement proposals. In addition to some roadbuilding elements that were already included in the slum-upgrading and erosion control programs developed by PPHC, these proposals included investments in the primary and secondary road network in excess of US\$10 million and improvements in intersections and traffic management, costing some US\$535,000 in investments and some US\$3.8 million in operating and maintenance costs until 1986. PPHC also recommended a major traffic study, including an analysis of urban produce marketing, for a cost of close to US\$0.5 million.

3.107 Since then, a number of actions have been undertaken. An alignment for a new road to the north of and parallel to Delmas has been selected and financing may be obtained from the Republic of Germany for the cost of about US\$2.5 million ^{1/}. Reconstruction of the existing Delmas road is being prepared by SAT ^{2/} and US\$2 million have been set aside by the government for the investment. The DTPTC is studying the construction of truck and bus parking facilities in the central market, reorganization of marketing space

^{1/} See Port-au-Prince City Orientation map for approximate alignments for proposed Delmas II and coral reef roads.

^{2/} Service Autonome des Transports, a transport service, attached to the DTPTC; see Chapter IV.

and reconstruction of Blvd. La Saline to link the Delmas and the northern highways to the port and to Harry Truman Blvd., which in turn links the port to the Carrefour road in the south. This latter project, which will be financed by the IDB with residual funds from other projects, would quadruple north/south traffic capacity through the downtown area. 1/

3.108 Another proposed study concerns a north/south connector either along the base of the Morne l'Hopital or along a stretch of coral reef off the coast to Carrefour. Since most commercial traffic in and out of the city is destined for or originates from downtown, the logic of a separate north/south connector is in doubt. Also, commercial vehicles going through the city have already adapted to delay patterns and tend to pass through Port-au-Prince in off-peak hours. In any case, the social benefits of the connector are not evident. No finance has yet been found for this study.

3.109 Finally, some design work is underway in the Service d'Urbanisme on intersection improvement and the Service de Circulation has put forward a proposal for institutional upgrading of traffic management capabilities. Information on this proposal could not be obtained.

E. URBAN SERVICES IN THREE PROVINCIAL TOWNS

3.110 The discussion of urban services in Cap Haitien, Gonaives and Cayes is relatively short. These are the three largest provincial centers after Port-au-Prince but, in 1975, together accounted for less than 11% of total urban population (see Annex Tables 1.3 and 1.4). The brevity of the discussion also reflects the extreme paucity of information concerning them. This lack of information upon which urban program proposals could be based may in itself be the major problem of the towns.

Shelter

3.111 Such published information as exists about housing in urban areas outside Port-au-Prince combines figures for towns with a current population of about 400,000 persons. It is biased by the inclusion of centers that are basically large agricultural villages, as shown by the statistic that 35% of the urban population outside the capital are directly engaged in agriculture. 2/

1/ In this context, the Service has serious reservation about the proposed construction of a new coastal shipping port (to be financed by IBRD) in the area of La Saline.

2/ Enquete Socio-Economique, IHS, op. cit.

3.112 The agricultural vocation of a significant portion of the population, even in important centers like Cap-Haitien, Gonaives and Cayes, underlines the difficulty in deciding where "rural" ends and "urban" begins. This affects the interpretation of certain observations. For example, houses made of wattle or wood in Port-au-Prince can be labeled as "slums" or as "inappropriate" methods of urban construction, but it is more difficult to do so for the smaller cities. Housing characteristics of the city population engaged in agriculture should not be expected to differ fundamentally from housing in nearby rural areas. What appears to be a "problem" in Port-au-Prince is not quite the same "problem" in other towns, similarities of appearance notwithstanding. Low-income shelter programs in the smaller towns will necessarily include an important number of farmers.

3.113 Shelter conditions in the provincial towns are better than in Port-au-Prince. The IHS reports that, in 1976, 28% of families in small cities lived in one-room dwelling units and 33% lived in two-room units. In Port-au-Prince, the respective figures were 58% and 17%. Unlike the capital, where most of these units were rooms in larger structures containing several families at a time, most units in the towns are independent structures. Within the size constraints of traditional building methods and given the lower residential densities observed in provincial towns, family housing space tends to be larger than in the capital.

3.114 At the same time, a larger proportion of families in provincial towns are property owners (47%), and a smaller proportion (17%) engage in long-term leases of land or dwelling units. It appears that most long-term lease families rent bare plots and build their own houses. This is supported by data on low-income household expenditures for construction and repairs in provincial towns (Table III-8).

3.115 Housing construction costs are, in general, lower in the smaller towns than in Port-au-Prince. Scrap is not usually available and low-income families tend to build with wattle and mud with straw roofs. With higher incomes, they invest in corrugated metal roofs and supporting structures. The methods of construction and labor use are the same as in the capital. Lower housing costs arise from slightly lower labor costs, and self-help construction, even in rural areas, is not common. For houses made of concrete blocks, unit construction costs are about the same as in Port-au-Prince. Lower costs of sand, rocks, labor, etc. compensate for higher cost of cement, wood and metal sheets. Higher housing investments in the provincial towns (see Table III-8) reflect higher maintenance costs associated with traditional construction methods, larger dwelling unit sizes, and a higher proportion of property owners. Renters pay a lower proportion of their incomes for housing and usually obtain larger housing space.

Table III-8: STRUCTURE OF FAMILY HOUSING EXPENDITURES
IN PORT-AU-PRINCE AND OTHER TOWNS IN 1970

Annual Income Class	Annual Construction and Repair Expenditures	Rental Expenditure as % of Total Expenditure
<u>US\$</u>	<u>Port-au-Prince</u>	<u>Other Towns</u>
0 - 100	0	0.20
100 - 140	0.40	0.40
140 - 200	0	0.50
200 - 250	0	0.40
250 - 300	1.40	0.55
300 - 350	0.85	1.40
350 - 400	1.50	1.90
400 - 450	1.60	1.20
450 - 500	1.60	2.15
500 - 600	5.80	15.70
600 - 700	3.70	11.40
700 - 1,000	4.10	2.15
1,000 - 1,700	17.40	4.35
1,700 and above	22.50	16.70

Source: Enquete Socio-Economique, op. cit.

3.116 A 1976 estimate puts housing investment in Cap Haitien, Gonaives and Cayes at a total of US\$1.7 million, or US\$15.00 per caput. This per caput level is about 25% of that estimated for Port-au-Prince. The structure of investment is indicated in Table III-9.

Table III-9: INVESTMENT IN THE BUILDING SUBSECTOR, 1976
CAP HAITIEN, GONAIVES AND LES CAYES
(US\$)

<u>Average Cost of Unit</u>	<u>Number of Units</u>	<u>Total Investment</u>	<u>Percent of Investment</u>
500	1,200	600,000	35.3%
2,000	200	400,000	23.5%
6,000	50	300,000	17.7%
Repairs	-	400,000	23.5%
TOTAL	1,450	\$1,700,000	100.0%

Source: Projets et Planification en Haiti, Vol. IV:
Logement, op. cit.

3.117 On this basis, with an estimated rate of household formation of 3.2% p.a., a calculated income elasticity of housing demand of 0.96% and an estimate of per caput real income increase of 1.1% p.a., the rate of increase in housing construction was estimated at about 4.3% p.a. until 1981. Table III-10 shows the estimated investment composition. Possible future increases in long-term finance availability as a result of creating the BDL are not taken into account in the estimate.

Table III-10: FORECAST OF SHELTER CONSTRUCTION ACTIVITY
IN CAP HAITIEN, GONAIVES AND LES CAYES, 1976-1981
(US\$)

<u>Town</u>	<u>Average Cost Per Unit</u>	<u>Number of Units</u>	<u>Total Investment</u>	<u>Percentage of Investment</u>
Cap Haitien	500	3,240	1,620,000	16.5%
	2,000	540	1,080,000	11.0%
	6,000	135	810,000	8.2%
	<u>Repairs</u>	<u>-</u>	<u>1,081,000</u>	<u>11.0%</u>
	<u>Subtotal</u>	<u>3,915</u>	<u>4,591,000</u>	<u>46.8%</u>
Gonaives	500	2,100	1,050,000	10.7%
	2,000	350	700,000	7.3%
	6,000	90	540,000	5.5%
	<u>Repairs</u>	<u>-</u>	<u>690,000</u>	<u>7.0%</u>
	<u>Subtotal</u>	<u>2,540</u>	<u>2,980,000</u>	<u>30.5%</u>
Cayes	500	1,560	780,000	8.0%
	2,000	260	520,000	5.3%
	6,000	65	390,000	4.0%
	<u>Repairs</u>	<u>-</u>	<u>530,000</u>	<u>5.4%</u>
	<u>Subtotal</u>	<u>1,885</u>	<u>2,220,000</u>	<u>22.7%</u>
	<u>TOTAL</u>	<u>8,340</u>	<u>9,790,000</u>	<u>100.0%</u>

Source: Projets et Planification en Haiti, Vol. IV: Logement, op. cit.

3.118 Public officials met in Cap Haitien agree that housing is a major issue. They indicate that about 40% of the population, or 4,300 families, live in slums and that others are forced to pay high rents for small spaces in existing high-grade structures. Four to five permits for the construction of latter-type homes were said to be granted per month, i.e., about half the rate of household formation of the higher income families.

3.119 As in Port-au-Prince, the low-income housing problem is perceived to be the existence of slums and the opinion is widespread that "decent" housing built for this group must be subsidized by the state. For higher income groups the main problem is one of finance. Current credit conditions prevent families from building homes, though the relatively lower cost of land in the city is still within the reach of middle-income residents. The BNRH is the only major financial institution active in the area.

3.120 Public efforts in the housing field have been limited to the construction of 32 units over 30 years ago, which are rented out on a monthly basis. The revenues, totalling US\$25 a month, are collected by the Administration Generale des Contributions and on behalf of the Office National de Logement in Port-au-Prince.

3.121 One of the problems associated with housing is the difficult terrain of Cap Haitien. On the west side of town, a steep hill rises to 700 meters, and river and marsh border the east. The space in between that is suitable for construction is less than one km in width, most of it already occupied by the older portions of the town. New low-income housing is now edging up the mountainside on land under long-term lease or being strung out for several kilometers along the main highway leading south. Suitable residential land east of the river is available, but has not yet been developed. Whether this results mostly from lack of urban services, difficulty in acquisition or public policy (the area lies between the airport and the town) could not be determined.

3.122 The Service d'Urbanisme 1/ has recently assigned one staff member to Cap Haitien on a part-time basis. He spends four or five days a month in the locality and, in cooperation with the resident engineer of the DTPTC, is working to prepare guidelines for a form of urban development best adapted to the site conditions. This is the Service's first attempt at extending the range of its activities beyond the confines of the capital.

3.123 In this context, it ought to be mentioned that the bridge linking the city center with areas to the east collapsed in August 1977. An IBRD transport mission recommended reconstruction of the bridge at a point further south. In the interim, USAID is providing a temporary bridge at the old site. If it is decided that the east side of the river is to be urbanized, future urban development will partly depend on when the new bridge is built and just how long the temporary bridge will remain in place. The decision on the site of the new bridge was based on engineering and regional transport considerations but did not take account of urban land use patterns.

3.124 In 1976, the Division de Promotion de Projets de Developpement of CONADEP, with the assistance of Louis Berger Int'l, Inc. prepared the only public housing proposal for the city for the period up to 1981. It consists of the construction of 100 houses under the auspices of ONL to be

1/ Since the reorganization of the DTPTC in mid-1978, the Service is now called Service de Planification Urbaine (see Chapter IV for details).

sold to families with incomes of about US\$100 a month at a monthly payment rate of US\$18.50. The investment was estimated at US\$275,000 and the 25-year management and operations cost at US\$200,000. The project was based on full cost recovery and, on paper, suggested an internal rate of return of 14.2%.

3.125 In Gonaives, public officials shared the view that housing was a major problem and that "slums" had to be eliminated. However, they insisted that some cost recovery had to be obtained and that houses built for low-income families should be kept simple. Their estimates of current housing needs were: 4,000 very inexpensive units which could be sold or rented at a rate between US\$2.00 and US\$5.00 a month, 100 moderate income units at US\$10 to US\$20 a month, 50 high income units at US\$40 to US\$50 a month and 20 villas for future industrialists and the like. Together, these proposals implicitly suggest replacement of 60% of the town's current housing stock.

3.126 Visits to the so-called "slum" areas of the town, located mostly on a flat area in the southern part of town, revealed an organization of housing which appeared no different than what one might expect in the early years of a sites-and-services program. There were wide streets with clearly demarcated easement lines and clear lot subdivision within residential blocks. Houses were a mixture of completely traditional construction with wattle walls and straw roofs, partly upgraded versions composed of wattle walls and sheet-metal roofs and final upgraded units with block walls and metal roofs. Control of urban development is well-organized by a local inspector of the DTPTC. No other provincial town has such an inspector. Gonaives also has the only representative of ONL outside Port-au-Prince. He is responsible for the management of 20 large homes built several years ago which are being sold to their high-income occupants. Revenues average a total of US\$120 a month.

3.127 In 1974, the city received a special allocation of US\$40,000 from the Ministry of the Interior for the construction of homes in slum areas. Ten apartments were built at a cost of about US\$120/m² and given to "responsible" families free of charge. All the units have since been subdivided and rented out by the original beneficiaries and they now house between 20 and 40 families. This subdivision activity was not known by the public officials until they visited the site with mission members. In 1976, CONADEP and Louis Berger Inc. prepared a housing project proposal for Gonaives with features identical to those for Cap Haitien.

3.128 In Cayes, the situation is much the same as in Gonaives. There is an expressed feeling that housing is a major problem, that slums should be eliminated, that subsidies are necessary, etc. Public officials noted that among poorest groups, who pay between US\$0.60 and US\$0.90 a month, there is still a housing shortage and that some family members must sleep in shifts. However, unlike the other towns, Cayes has a limited ongoing housing development program.

3.129 Several years ago, the North American Oblate fathers organized a savings and loan association in the town. It offered no interest on savings and charged no interest on loans. The object was to provide a savings mechanism for salaried workers and families whose deposits and withdrawals were too small to be handled by the commercial bank. The management costs

were subsidized by the church. Later, with a capital fund obtained from OXFAM, the association began to build middle-income homes to be sold on credit with 10-year maturities to members with acceptable savings and loan repayment records. At first, the houses were built in the cost range of US\$600 to US\$800. By 1976, inflation had forced increases to US\$1,200 and, in 1977, the same house cost about US\$1,600. Since there is no interest charge (a question of morality for the Oblates), and since costs have been increasing, the rate of construction largely depends on OXFAM allocations. Currently, about 20 units a year are built and a little more than 200 have been completed. Monthly payments range from US\$8.00 for earlier sales to US\$16.00 for current sales. Purchasers typically earn US\$60 to US\$150 a month.

3.130 Public housing is limited to 14 rental units built several decades ago. The Administration Generale des Contributions collects US\$11.00 a month from them on behalf of the ONL. In 1976, CONADEP and Louis Berger Int'l Inc. proposed construction of 100 units identical to those proposed for Gonaives and Cap Haitien.

Environmental Management

3.131 As noted above, the topographic condition around Cap Haitien has led to urban development up the mountainside on the western side of the city. This small-scale version of what has happened in Port-au-Prince has increased erosion and obstruction of the storm-sewer system. Water and eroded material flowing down the steep streets now cause damage to them and to homes in their path. Deforestation for agricultural uses and urbanization have carved out a principal ravine on the north side of the city called "Bas de Ravine." Small houses on its banks are occasionally washed away. Though degeneration has started, the problem would remain manageable if land use enforcement were undertaken on the hill. Rapid action can prevent the need to rebuild the drainage system in the future. In the light of the limited DTPTC budget for the whole region, i.e. one engineer, nine salaried workers (US\$1,700/month), and a payroll of US\$2,500/month for day workers, special preventive action is called for. Hopefully, the Service de Planification Urbaine will address this problem.

3.132 Solid waste collection is carried out through joint efforts of the municipality and the Department of Public Health, complemented by drainage clearing by the DTPTC. Although four trucks used to be available several years ago, the city now has only one plus 12 wheelbarrows. First appearances suggested that an adequate job was being done with the single truck, although the mayor stated that he needed at least three more to do the job well. Problems of collection exist in the low-income areas in the marshes and hills, but these are inaccessible to trucks in any case. Proper collection in these areas would require other labor-intensive methods. There is no dump in the city. Waste is thrown into various ravines with the hope that it will wash into the sea.

3.133 Liquid waste is disposed of in much the same way as in the capital; domestic water is disposed in the streets and in stormsewers or on the ground and human waste in cesspools and pits. Five hundred homes are equipped with

toilets, of which 50 have septic tanks or cesspools. 1/ The rest of the population uses latrines and pits. In general, the water table is at least 10 meters below the surface and hence poses few problems regarding pit construction. The exception is the marsh area to the east of the city's entry gate where the water table is closer to the surface. The whole of the city is underlain with polluted groundwater, but many homes and establishments still draw significant quantities from wells. The Services Hydrauliques de la Republique de Haiti have analyzed well-water samples on several occasions. Some of them were found improper for human consumption. The Services Hydrauliques have recommended to the owners not to use the wells but have no power to close them.

3.134 The topographic conditions in Gonaives are quite different from those in Cap Haitien. The city is spread out on a flat plain just a few feet above sea level. During the dry season, the area is semi-arid and the water table drops well below the surface. During the rainy season, the table rises almost to the surface, and the city is flooded for several days at a time.

3.135 The central portion of the city is equipped with a closed storm-water drainage system built several years ago. However, it has become completely obstructed with silt and solid waste and stormwaters run along the surface. When they subside, they remain stagnant in the closed system beneath streets. According to public health officials, this trapped body of water is a major breeding ground for mosquitoes which plague the city and lead to occasional malaria problems. City officials noted that the city used to have an open channel drainage system which offered better run-off characteristics and could be cleared regularly to minimize the amount of stagnant water. Their request to Port-au-Prince several months ago, asking for construction of an open channel system, had not received a response.

3.136 At present the DTPTC budget for the Gonaives region is US\$1,600 a month for salaries of one engineer and 13 employees plus US\$1,740 a month for daily worker payrolls. This labor force is adequate to engage in a major drainage clearing operation for a short time, but does not have any of the hand tools and machines necessary to do the job. 2/

3.137 Solid waste collection and disposal is carried out by the Department of Public Health with the use of 30 wheelbarrows. Such waste as is not washed or thrown into the drainage system is collected and dumped in waterways and fields at several locations around the city. A new truck is expected shortly and this will permit a higher rate of collection and the ability to transport waste to a location farther away from town.

1/ Enquete Socio-Economique, op. cit.

2/ The two sewer clearing trucks of the Service de Genie Municipal in Port-au-Prince, unusable in the capital, might be helpful in Gonaives. The obstructions in the Gonaives system may not contain as much heavy eroded material and the trucks might prove useful, if not for complete clearing, then for regular preventive maintenance after a major hand-clearing operation.

3.138 Domestic wastewater is either dumped into the stormsewer system or directly onto the ground. As to human waste disposal, about 220 homes are equipped with toilet facilities, 1/ the rest use latrines and pits. Because of flooding and the seasonal rise of the water table, most latrines become unusable for several months at a time. In those circumstances, shallow holes are dug, used, refilled and then another hole is dug. Residents of lower-income areas do not bother with holes and use the surrounding mud flats. During rainy periods, these practices contaminate the floodwaters and constitute a contamination risk for the potable water distribution system which is under irregular pressure. Human waste disposal facilities suited to these conditions and adapted to the socioeconomic characteristics of the population need to be developed.

3.139 Les Cayes also lies in a flat area only a little above sea level. Seasonal rain patterns are not as variable as those in Gonaives and the water table is always close to the surface. This has compromised most public and private attempts at finding solutions to stormwater and human waste disposal. With respect to stormwater, the city is equipped with an unlined, open drainage channel system which has to be cleared every two months. Between clearings, the stagnant waters exacerbate a local mosquito and malaria problem caused by rice fields inside and around the city. Although a major landfill program and a sloped and lined drainage channel system would help remove waters from the city, the insect problem would persist because of the semi-stagnant water bodies in the surrounding rice fields. The regional budget of the DTPTC with US\$1,540/month for 12 salaried employees and US\$2,460/month for day laborers is inadequate to undertake a major city drainage construction program on its own. Either a simpler solution must be found, or else significant additional allocations must be obtained. Response from the capital has been slow; the departmental engineer is still waiting for two trucks requested three years ago.

3.140 Concerning human waste disposal, the high water table has limited the number of deep pits in use, and more reliance is placed on shallow holes that are replaced when full. For several years, PAHO had manufactured high strength reinforced concrete latrine covers in Cayes, which were marketed throughout the rural countryside. The idea was to provide families with portable covers which could be moved from pit to pit as necessary. Information on the extent of sales and the current status of the factory was not obtained. Like Gonaives, Cayes requires a marketable design for human waste disposal adapted to its particular environmental conditions.

3.141 The municipality and the Department of Public Health are responsible for solid waste removal in the city. Two trucks and a number of wheelbarrows are available for this service. Public officials suggested that two more trucks were necessary, but more efficient use of existing personnel and equipment could provide the same effect. At most, the city produces about 30 m³/day, i.e., an amount which one dump truck can carry

1/ Enquete Socio-Economique, op. cit.

for disposal with six to eight round trips. In all three cities, as in Port-au-Prince, officials tend to rely on acquisition of more heavy equipment as a means to solve the garbage collection problem rather than better use of what they already have.

Water 1/

3.142 In Cap Haitien, the water supply system functions 12 hours a day and serves about 23% of the population. Distribution is by zonal rotation with a frequency of three or four days. Because of the inadequate service provided, the number of active house connections has decreased in the past five years from 1,800 to about 1,000. There are eight public standpipes serving an estimated 4,000 people. Water from wells and springs 10 km away is pumped to the city. There are three storage reservoirs with a total capacity of 4,200 m³. The largest of these, a steel tank with a capacity of over 3,100 m³ is out of service but can be repaired. The other two, built in 1896, are still in use. The distribution system, with 27 km of pipes, was built in 1922 and extended in 1952 and is in very poor condition.

3.143 In Gonaives, the system provides limited service eight hours a day to about 17% of the population through 490 house connections and six public standpipes. Water from one well is pumped directly into the distribution system since there is no storage reservoir. The distribution system has 33 km of pipes in good condition.

3.144 In Cayes, the system provides service three hours a day to 72% of the population, 17% served by about 700 house connections and another 55% from public standpipes. Water from one well dug in 1927 is pumped into a single storage reservoir of 380 m³ capacity. It is in bad condition but can be repaired. Water flows from there into a 17 km distribution system built in 1927 and 1966. 2/

3.145 Though water consumption rates tend to be low in all three cities, only Cap Haitien has developed a major third-party sales situation resembling that of Port-au-Prince. In Gonaives and Cayes, water is distributed freely to many of those without connections. In addition, there are many private wells in the two areas which provide water to a significant portion of the respective populations. Administration and management of water systems in all three towns is the responsibility of a newly created Service National d'Eau Potable (SNEP) which has 111 employees. The Service is weak in all dimensions of planning, execution and management.

1/ This section relies heavily on: Provincial Towns Water Supply Project, Staff Appraisal Report, No. 1694b-HA, IBRD, Nov. 30, 1977.

2/ Rapport sur l'Approvisionnement et/ou l'Amelioration des Services d'Eau Potable dans 10 Villes Moyennes d'Haiti, Tome I a IV; Services Hydrauliques/OPS/OMS/PNUD, Port-au-Prince, August 1977.

3.146 In late 1975, UNDP granted US\$155,000 to the Government to finance the feasibility studies for water supply systems in 10 towns, including Cap Haitien, Gonaives and Cayes. This grant was increased to US\$227,000 in FY1977. The activities financed by the UNDP grant (with PAHO as the executing agency) covered the preparation of feasibility studies for the 10 towns, an analysis of SNEP's financial and administrative situation and a study of the socio-economic conditions of the population in these towns. Three towns, including Cayes, have been selected by the Government for financing under a UNCDF grant; IBRD financing will cover the remaining seven towns, including Cap Haitien and Gonaives.

3.147 The IBRD/IDA project involves improvements and extensions of the water supply systems of Cap Haitien and Gonaives. It is intended to eliminate deficiencies in the existing systems and to extend service to a large segment of the population that does not have adequate and safe water supply. The project will also contribute to improving the institutional and operational capabilities of SNEP, to develop long-range policies for the sector, and to assess the needs and define priorities for future programs. At the end of the construction period by 1982, the project will (a) provide potable water to about 90,000 people by rehabilitating and extending the distribution system; the systems will have adequate production capacity to serve 125,000 people by 1993; (b) control water wastage by the use of flow-limiting devices (restricted orifice) in all house connections and public standpipes; (c) improve the efficiency of SNEP's management and operations; and (d) develop a long-range plan to improve the service levels in both the urban (except for the metropolitan area of Port-au-Prince) and rural areas. The total project cost for the seven towns is estimated to be of the order of US\$8 million, of which US\$2.2 million is the anticipated capital cost of the system in Cap Haitien and Gonaives.

3.148 The physical components of the project are designed to substantially improve the reliability of existing systems, and would have adequate capacity to service about 90% of the population in these towns (50% from house connections and 40% from public standpipes) until about 1993, and permit phased expansion in capacity as demand increases. The 10% of the population not served is located in sparsely populated areas, where it would be very costly to provide service. The project would satisfy the basic water requirements of most of the population and reduce considerably the incidence of disease from unsafe water.

3.149 Parallel to this IBRD project, UNCDF has given a grant of US\$1.34 million with IBRD as main executing agency, for the construction and improvement of water supply systems in Saint Marc, Les Cayes and Leogane. Close coordination between UNCDF and IDA will assure that the same design and construction standards will be applied to the two projects and that both organizations will act in parallel to improve SNEP's administration and finances. The UNCDF project will provide safe water to a population of about 54,400 by 1982 and will have adequate capacity to meet demand up to 1993 in these three project towns. The estimated capital investment is expected to be of the order of US\$630,000 in Cayes. Presupposing that all

goes according to plan, all three towns will have better water service in the future than today, and much better water service than that available or planned in Port-au-Prince. However, if 24-hour pressure cannot be maintained, or if disinfection becomes irregular, then the new system will continue to become contaminated if efforts at improving drainage and human waste disposal methods are not undertaken.

Transport

3.150 Intra-urban transportation in Cap Haitien, Gonaives and Cayes is, for all intents and purposes, a non-issue. For years, the important problem was transport between the towns and Port-au-Prince, and this is now solved for the first two towns and a solution is well underway for the third. Intra-regional transport remains an issue, but this is being addressed by several multilateral and bilateral assistance agencies which work with the Government.

3.151 One issue which remains is street paving in the towns. Programs in this area are slowly being carried out, especially in Gonaives. Justification for paving cannot be made on transport grounds alone but rather on grounds related to improving surface drainage characteristics in the towns. Another issue, which may take on more importance in the near future, is the small space accorded to the truck and bus terminal on the outskirts of Cap Haitien and its distance from the central produce market of the town. At present, these questions are minor but, as the town grows larger, there will be a need for more marketing space, which is not possible at the present market location, and more truck and bus parking and loading/unloading space, which is also not available at the current location of the terminal. The efforts of the Service de Planification Urbaine to begin urban management are opportune, and this service may address the issue.

F. SUMMARY AND CONCLUSIONS

3.152 Housing conditions in Port-au-Prince are poor:

- (a) 64% of the housing stock are built of scrap, wattle, straw and wood, much of it considered slums by government officials;
- (b) 43.7% of the population live in densities of 800 people per hectare rising to as high as 2,000 in some places;
- (c) more than 80% of the housing stock in Port-au-Prince are not connected to the water supply system;
- (d) 61% of dwelling units offer less than 3 m² per resident; and
- (e) new construction is inadequate and high-density areas continue to grow denser.

3.153 Shelter conditions in the provincial towns are better than in the capital. Compared to Port-au-Prince, dwelling units tend to be larger, subdivision of existing units less frequent, and a larger proportion of families are owners. Rents typically take a smaller proportion of income. With a sizeable proportion of the labor force in provincial towns engaged in agriculture, traditional construction methods are less "inappropriate" than in the capital. Construction activity here also remains inadequate and shortage of housing is felt at all income levels.

3.154 Both supply and demand factors constrain the quantity of land, especially for low-income residential purposes. In Port-au-Prince, large private land owners are reluctant to release land for this purpose for fear of jeopardizing the value of adjacent properties for future, more profitable, use of the land. Demand for land is constrained by land prices and transaction costs, in relation to incomes, the cost of construction and, above all, by the absence of adequate housing finance. Maturities for housing loans are typically five years and only for some of them eight and one-half years. Only a very tiny fraction of the population has access to these loans and the creation of the BDL may not change the situation for the vast bulk of the population. If present thinking on the BDL's operations prevails, more than 95% of the urban population may still not have access to institutional housing finance. It is not surprising that, at the moment, three out of four families in Port-au-Prince and three out of five in provincial towns live in rented accommodation.

3.155 There is no national shelter policy. Government attitudes to low income shelter provision, in particular, can be characterized as follows:

- (a) the housing problem is the existence of slums, i.e., of structures not made of concrete blocks, and government action should aim at providing concrete-block homes for low-income families. The concept that houses made of scrap may be valid shelter for the economy of low-income families is not generally accepted; and
- (b) low-income families cannot afford to pay for housing and cost-recovery, direct or cross-subsidized, is impossible. As a result, government shows little interest in increasing the supply of residential land for low-income families for fear of creating new slum areas and insists that heavy state subsidization is required for low-income housing.

3.156 In the past, these views have resulted in severely limiting public action to provide low-income housing. The public sector has intervened in shelter only for emergency relocation of no more than 18,000 persons since the beginning of the 1970's, all of them in Port-au-Prince. In principle, the St. Martin and Drouillard projects are a first step away from these traditional ideas, but efforts are still being made to translate the original intent of

the projects into the more habitual forms of public housing delivery and standards for the projects have been rising. The attitude of public officials has thus been a major obstacle in the path of an extensive program in low-income shelter provision. This may now be changing following an endorsement of the sites-and-services approach to low-income shelter by the President of the Republic.

3.157 The budgetary constraints in the country and the pervasive shortage of skilled manpower make it imperative that, both for low-income shelter and for urban service provision, minimal standards should be adopted initially. Projects need to be kept as simple as possible and to increase in sophistication only in line with institutional improvement. This applies both to physical standards of service provision and to sophisticated management methods, such as revolving funds.

Environmental Sanitation

3.158 The erosion problem on the Morne l'Hopital dominates environmental sanitation in Port-au-Prince. Deforestation, goat grazing and other inappropriate agricultural practices on the mountain, as well as uncontrolled urbanization on the lower slopes all contribute to flushing an estimated 100,000 to 200,000 tons of eroded material annually into the stormwater drainage system of the city. Significant amounts of solid waste also enter the system due to the inefficiency of the garbage removal services and, while the drainage system would be adequate most of the time, it is unable to carry this much solid material. As a result, flow capacities of the system get progressively reduced during the rainy season by as much as 75% in the downtown area and this causes regular flooding in the city. Estimated flood damage reaches US\$700,000 per annum, not including the costs of the inadequate regular clearing activities and crisis clearing after heavy storms.

3.159 Action on the erosion problem has been hampered by past lack of official concern with erosion and waste management, partly due to the politics of private land ownership. The current insufficiency of public material resources is aggravated by managerial and administrative inadequacy and by lack of coordination among the compartmentalized and conflicting responsibilities of the institutions involved. A substantial attack of the erosion problem on the mountain is now included in the IDB drainage system improvement project recently approved.

3.160 In the meantime, the current situation affects all residents in Port-au-Prince but weighs most heavily on the low-income portion of the urban population. It is primarily low-income housing built on steep streets or adjacent ravines and large drainage channels that is damaged or destroyed through flooding. In addition, flooding in such areas as La Saline, Brooklyn and St. Martin causes severe health hazards, which are compounded by flooding in the central market area where the bulk of agricultural produce for the city is handled. Health hazards in these areas are increased by the presence of human waste in the flood waters and by the risk of contamination of the water supply system (see below). Beyond the clear relationship between inadequate waste removal and drainage system obstructions, decomposing waste is the feeding ground for pigs, goats and rats and breeds a variety of disease vectors thriving in close proximity to human habitations.

3.161 Among the three provincial towns analyzed, Cap Haitien is building up an erosion cum drainage problem very similar to that in Port-au-Prince in terms of causes, effects and possible remedies. Rapid action is required to avoid the need to reconstruct the system completely. There are no similar erosion problems in Gonaives and Les Cayes, both of which are built on flat areas very little above sea level. However, both towns have a drainage problem with inadequate clearing operations and stagnant water bodies that create mosquito and malaria hazards. Technical research and experimentation are required to develop suitable drainage methods.

3.162 Solid waste removal in Port-au-Prince and in the provincial towns suffers from insufficient resources but mostly from inefficient management. Everywhere, solid waste disposal in the drainage system aggravates flood control problems and increases health hazards. In Port-au-Prince, a composting plant may become operational and IDB has included a solid waste collection component in its drainage rehabilitation project. Not enough is known about these measures to assess whether they will be adequate. Management assistance to provincial towns will also be required but is not part of any known project today.

3.163 Liquid waste disposal in Port-au-Prince is mostly through latrines. The cleaning service run by the Ministry of Health is expensive and the cleaning trucks do not have easy access to most low-income high-density areas because of the lack of access roads. Latrines are therefore sometimes cleaned only by being flushed out during the rainy seasons and the human waste mingles with the flood waters and parts of it get deposited in the streets and in the central market area. Some parts of the city are built on marsh land areas, and some 60,000 people live under conditions where they have no latrines and stagnant water in and around the homes most of the time. Irregular water pressure and leaks in the water pipes, often lying uncovered in the streets, lead to contamination of the system. Domestic water other than human waste, mostly from high income areas, is also a source of contamination of the water system during the dry periods.

3.164 There is no sewerage system in Port-au-Prince and it is not likely that this will be an economic proposition in the near future. However, improvements to the present collection and disposal methods could be effected and a regular latrine clearing program could be made financially self-sufficient. Construction standards could also be developed for housing built around the water sources, which now contaminates part of the water supply of the city, and a study on the absorptive capacity of the soils underlying the city could help in devising a proper disposal system.

3.165 In the provincial towns, human waste and other domestic waste-water are disposed of in much the same way as in Port-au-Prince. To varying degrees, all three provincial cities have problems with high water tables in all or part of their residential areas, which makes latrines and deep pits generally or seasonally unusable. Like in parts of Port-au-Prince, human waste enters floodwaters and risks contaminating the potable water systems. Technological research and experimentation is required to develop suitable methods of human waste disposal.

Water

3.166 In Port-au-Prince the erosion problem also affects water supply. There is no overall hydrological survey of the area, and presently known resources cover only about half of the needs anticipated for the year 2000. As the runoff from the mountain increases, absorption in the soil diminishes and the sources from the mountain have produced sharply declining quantities of water over the last decades. Pumping of water from the adjacent Cul-de-Sac plain has now reached a level where saline infiltrations are taking place which may indicate overpumping. Total water resource availability thus remains an important issue. If it is discovered that there is indeed a serious water resource problem, the burden of long distance water transport or large storage capacity may significantly increase the costs associated with further urban growth and may affect low-income families most severely. However, serious efforts at loss minimization and at restoration of the Morne l'Hopital could both, if undertaken, lead to relatively large increases in the amount of water available. This might be sufficient, at increased levels of low-income group consumption, at least through 1983.

3.167 The available water is generally very alkaline, is not regularly softened at the source, and the resulting deposits clog the system so that the life of water mains may be as low as eight years in certain parts of the city. System losses are as high as 50% and there is no metering of water consumption. Many of the connections are illegal and rates for legal connection are based on property values and some assessment of consumption levels. There are no penalties for waste of water. Leaks in pipes take a long time to repair and CAMEP has had sizable deficits in its operations.

3.168 Distribution methods of water rely heavily on private water sellers, which often draw the water from the CAMEP system. These private sellers include large-scale trucking operations and some 14,000 small water sellers marketing water by the bucket. Some 23% of the population obtain three-quarters of the water and some 47% obtain 11% of the water. About three-quarters of the population consume less than 30 l per caput per day. Prices for legal water connections come to a maximum of US\$0.11/m³, truck delivery costs US\$2 to 3/m³ and bucket consumers pay an average of US\$2.30/m³. The latter figure, however, may rise as high as US\$20/m³ in periods of drought such as 1975 or 1977. In addition to natural scarcities, the system is also prone to artificial scarcities by the independent methods of operation of the valve operators or by deliberate sabotage. Water costs are extremely high for the low-income population and amount to some 8% to 12% of family income at levels of US\$40 dollars per month and can be considerably higher for the lowest-income population.

3.169 Expansions in the water system recently financed by IDB have not included sizable numbers of public standpipes. There is currently only one public fountain per 12,500 low-income persons and it is estimated that some 300 to 500 fountains need to be built for average consumption of 30 l/c/d by the low-income population; only 10 fountains were built in

Phase II of the IDB water project. Some action is now underway on the institutional upgrading of CAMEP, the installation of meters and central valve control. IDB also stands ready to finance a hydrological study and a water master plan for the year 2000 if requested to do so. Other actions planned by CAMEP include a new water tariff, the control of the trucking operations and payments by well owners, since all water sources are considered national property. If these efforts are successful, many of the current regressive aspects of water distribution, consumption, and expenditure may be alleviated four or five years from now. CAMEP's institutional upgrading and efforts should, therefore, be followed closely.

3.170 In the three provincial cities, public water service covers only part of the population, is intermittent and unreliable and often contaminated. A private water market has developed only in one of them, Cap Haitien. In Gonaives and Les Cayes, water is generally given free of charge to those without connections. All three of the towns are among the 10 provincial centers where water supply and distribution networks will be upgraded through recently approved UN and World Bank projects. When completed, these projects will ensure adequate and safe water supply until the early 1990's. In parallel, the recently created SNEP, which is in charge of water supply and distribution outside the metropolitan area, is expected to be strengthened to the point where it can fulfill its mandate. To attain safe water supplies it will, however, be necessary to solve the drainage and human waste disposal problems affecting the provincial towns.

Transport

3.171 The transport situation in Port-au-Prince is characterized by inefficient use of the existing facilities. In addition, many high-density, low-income neighborhoods have no or inadequate access for road transport. This aggravates conditions of emergency intervention, supply of construction materials, latrine clearing, etc. One thousand five hundred buses and minibuses provide public transport in the city. They are privately owned and charge government-regulated rates that are not affordable by the bulk of the population. For example only one trip per day amounts to 14% of the income of a family living at the cutoff level for relative poverty, i.e., about one-third of average income in the urban area. Some two-thirds of the population are in this situation. It is therefore not surprising that most of personal transport is pedestrian. Close to 90% of all work trips and over 80% of the distances covered by work-related trips are done on foot. No substantial change is anticipated by 1986. Most work-related trips are to and from the central area, where 54% of employment opportunities in Port-au-Prince are located and where some 300,000 people reside. The location of the central market is the main urban transport question for the low-income population.

3.172 The absence of an explicit urban transport policy, of urban transport management capability and of overall urban planning constitutes a serious problem. It makes it impossible to forecast the future shape and structure of the city and precludes accurate planning of urban service requirements and road facilities, thereby creating high risks of wastage in public resources. However, the weakness of local institutions makes it inappropriate to suggest that the Government immediately set forth a transport policy and create a corresponding central institution. It is preferable to extend and clarify the mandates of existing institutions, assist in their slow upgrading and facilitate their cooperation to encourage the development of overall transport management capacity.

3.173 There are no intra-urban transport questions in the provincial cities. Paving of city streets could not be justified by transport questions alone but might be needed to improve the drainage situation. In the longer run, Cap Haitien may develop a problem with the location of the central market and bus and truck parking and loading areas. These are presently relatively far from each other and cannot be expanded at their locations. With growth of the town, more space will be required for both. This issue will have to receive attention, preferably through the recent effort of the Service de Planification Urbaine to develop an urban planning mechanism for Cap Haitien.

CHAPTER IV: URBAN MANAGEMENT

A. SOME GENERAL FACTORS AFFECTING INSTITUTIONAL PERFORMANCE

Unsatisfactory Civil Service Status

4.01 One overall problem that should be mentioned at the outset is the general status of the civil service. While it would be inappropriate to develop this in detail in the framework of this report, it does have a pervasive influence on institutional performance. At the present time, the low level of remuneration is compounded by the absence of unified procedures for selection, promotion and remuneration of staff. There is no classification and grading of posts, nor are job descriptions generally available, and there is little security of tenure.

4.02 As a result, it is difficult to attract and retain personnel of the highest calibre in the public service, emigration of qualified staff is quite sizeable, it is common practice for public officers to engage in other forms of employment or professional activity parallel to their official jobs, and it is not unknown for an officer to be appointed to and paid for more than one official post. It is also possible to find persons with similar qualifications and experience, performing comparable duties and receiving substantially different levels of remuneration. The Presidential Commission on Administrative Reform that was established some years ago to consider these matters has yet to produce any publicly available results.

Excessive Centralization

4.03 Decision-making is almost exclusively concentrated in Central Government in Port-au-Prince. Only a few government departments have offices in provincial towns ^{1/} and those that have delegate practically no decision-making authority to them. Their budgetary allocations are normally limited to allocations for wages and salaries and the bare minimum of other current expenses. All decisions on equipment or other investment expenditures have to be referred to Port-au-Prince. This is true also of the municipalities which have no power to incur investment expenditures, even within the amounts available in their meagre budgets. Express approval has to be obtained from the central government in Port-au-Prince.

4.04 Within government departments, many matters that could be considered of a routine character also have to be decided at the highest level. This creates bottlenecks and considerable delays throughout the machinery. As a result, subordinate staff and, particularly, provincial officials, are apathetic and, in many cases, do not even forward their proposals to the central

^{1/} Under a recent agreement with USAID, four ministries, including the DTPTC, will get special budget allocation of US\$25 million per annum over an initial period of five years to step up their activities in the provinces.

authorities. This situation also contributes to the reluctance of public officials to be posted in the provincial centers and creates a disincentive for industries to locate outside of Port-au-Prince and its immediate surroundings.

Uncertainty of Mandates

4.05 Throughout the following sections, it will become clear that basic mandates for many urban activities lack precision. They are open to varying interpretations and leave excessive room for particularly dynamic or powerful individuals to move their institutions into activities that are not or should not be part of their functions. Given the general shortage of resources, this is often done at the expense of their legitimate mandates. DATPE, for example, has paid much less attention to its national and regional spatial planning functions than to Port-au-Prince in general and the development of the very specific UNCDF projects in particular. CAMEP has been making population projections, etc., when it might more usefully have developed up-to-date plans of the system it operates. The lack of precision in mandates also makes it relatively easy not to implement legal provisions, so that implementation is much less satisfactory than the basic legal framework itself.

4.06 The problem is compounded by clear duplication in mandates, such as can be noted for the ONL and the BDL, for industrial and craft promotion offices and for some of the other urban service delivery agencies. It is further aggravated by the absence of medium or long-term guidance in most policy areas on objectives, strategies and instruments. Pervasive uncertainty as to the direction and scope of institutional development is the result.

4.07 With few exceptions, institutions in the country do not coordinate their interventions. This is partly due to the absence of clear guidelines to this effect and partly the result of uncertainties surrounding the mandates of the various institutions. Since there is no functioning overall planning agency for the Port-au-Prince area or for any other urban center in Haiti, coordination among the relevant agencies is left to the goodwill of the personalities involved and to their perception of their own institutional or private interests. Problems in this area abound and many can be identified. They range from the overall regional and urban planning level (for example, between DATPE and the Service d'Urbanisme) ^{1/} through the delivery of employment promotion and urban services (like in housing or environmental management) to the implementation of rural development projects without adequate consideration of their urban impact. The tradition of institutional cooperation in the interests of efficiency and substantive problem-solving has simply not developed.

^{1/} The mandates of the Service d'Urbanisme and of DATPE have been modified during 1978 (see below).

Manpower Shortages

4.08 As was pointed out in Chapter I, the basic educational system of the country provides access only for a fraction of the population. The low output of the basic system in turn reduces the scope for further technical, professional and administrative training. Together with the emigration, at least in the past, of the educated, this produces a dearth of qualified mto staff them. The staff strength of the Port-au-Prince Municipality, for example, appears quite high but the staff is inappropriately concentrated in general administrative capacities and lacks the needed technical and professional qualifications. Similar problems affect many government departments and institutions.

4.09 Haiti depends largely on external sources for the training of much of its specialized personnel. In those cases where there is no dearth of scholarships and other assistance, it remains difficult to find persons of the right caliber to take advantage of them. Some services, like the Service d'Urbanisme, find that even though they have eligible candidates, their staffing situation is such that they cannot afford to release more than one or two a year. The University of Haiti trains architects and engineers and the country seems to be reasonably well supplied with these. However, there is at present no training of urban and regional planners, who are consequently all trained abroad. There are perhaps no more than half a dozen trained planners in the country, and there is also a shortage of well trained economists.

4.10 In the area of administrative training, some 30 persons have recently completed a 9-month course of training in Organization and Methods and are now dispersed throughout the various ministries and para-statal bodies. Another 30 were due to start training in January 1978. Last year, four persons graduated from the course in Social Administration in the Faculty of Human Sciences, and twenty-two are currently enrolled in this course. Only one student completed attendance of the management course at the National Institute for Public Administration last year, in a course which started with eleven students. Two of these went off on foreign scholarships and the others dropped out. Thus, prospects for the availability of personnel with appropriate urban management skills are not brilliant for the near future.

4.11 These various negative factors are mutually reinforcing. Low remuneration aggravates the shortage of qualified staff in public administration which in turn contributes to justifying centralized decision-making. The latter is partly responsible for the reluctance of staff to serve in the provinces, which makes it difficult to enlarge the power of local bodies and so on. By the same token, if this vicious circle could be broken, for example through improved material conditions in the civil service or through devolution of power to local bodies, a self-reinforcing process of improvement might result.

B. REGULATORY POWERS AND INSTRUMENTS

Basic Legislation

4.12 The basic legislation for the control of urban development is an Executive Order (decret-loi) of 1937 establishing special rules relating to housing and land use in towns and elsewhere in the country and arranging for their coordination in a manner conducive to the necessities of hygiene and modern town planning as well as regional and national needs. 1/ In its seven chapters, it lays down a large array of rules pertaining to town planning and the supply of urban services.

4.13 Like most of such legislation in that period, the 1937 law is heavily oriented towards architectural and public health aspects. While it sets the requirement to seek permission for any construction, the procedures for obtaining the permit focus on details of the design and structural characteristics of the proposed building. The law does not provide for examining whether a building or a sub-division should be allowed in the proposed location in the first place, nor does it make adequate arrangements for measuring the impact of a sub-division for example, on traffic flows, the provision of public utilities and communal facilities, etc. Though there is some requirement for applicants to make provisions for water supply, waste and sewage disposal and roads, there is no obligation to ensure provision of basic infrastructure prior to the occupation of lots.

4.14 The legislation has other shortcomings. It does not deal with changes in land use, and, for example, it is not prohibited to change a dwelling unit into a dance hall or factory. It establishes no control over the leasing of land and no requirements for provision of minimum services on such land. 2/ Finally, there is no mechanism to control developments sponsored by government departments and para-statal bodies. For example, the mayor of Port-au-Prince and the town planning office have no power to regulate the development of industrial estates in the metropolitan area or to control the siting of facilities such as schools, clinics, community centers, or the timing of infrastructural developments.

4.15 Expropriation for public purposes is regulated by a law passed on February 6, 1948. 3/ To obtain a "declaration of public interest", the agency involved makes a request to the general tax administration which technically

1/ Decret-Loi Etablissant des Regles Speciales Relatives a l'Habitation et a l'Amenagement des Villes et des Campagnes, Le Moniteur, 92nd year, No. 63 of August 5, 1937.

2/ This affects a large part of low-income shelter, in particular because the building permit procedures do not, in practice, reach down to this level.

3/ The text was not obtained by the Bank mission. Also, there remains some uncertainty about the dates of the basic laws governing expropriation.

identifies the land. Subsequently, the Ministry of Finance prepares the order which, after signature by the President, is published in "Le Moniteur", the official gazette. This law is considerably strengthened by subsidiary legislation, which establishes procedures to delineate clearly the area required for public purposes and to ensure speedy possession by the state.

4.16 Once a declaration of public interest has been made, the procedures for compensation and taking possession are strong and expeditious. However, major delays may occur between the time a request for public interest is initiated and the signature of the necessary decree. In the case of the UNCDF-financed projects in St. Martin and Drouillard, six to eight months elapsed from inception of the procedure to the submission of the legal texts to the Presidency for signature and another four months until the decree was signed and published in the official gazette. Delays may also occur during the functioning of the Special Compensation Commission, which has to meet and report on each individual property. Where the area to be expropriated belongs to a large number of owners and where structures or land improvements have to be evaluated, it may take considerable time for the Commission to finish its work. The projects at St. Martin and Drouillard should provide a good test of the working of the machinery.

Other Instruments

4.17 Haiti does not have at least three usually necessary or helpful instruments for urban management. Firstly, for all practical purposes, Port-au-Prince has no cadastre. While cadastres exist in the provincial towns, they are mostly well out-of-date, in part because it is costly to change entries. Determining the present ownership of a piece of property is therefore a lengthy procedure and can be expensive. Secondly, there is no comprehensive inventory of public real estate, which is held by a variety of government departments and institutions, although the Ministries of Finance and the Interior share the legal responsibility for its administration and supervision. ^{1/} Whether the government owns a given piece of property is, therefore, determined on a case by case basis as the need arises. Finally, neither Port-au-Prince nor the provincial towns have zoning plans. While the urbanization law of 1937 provided the basis and some general prescriptions for their development, no time schedule was fixed for this work, and its initiation was left to the discretion of the Ministry of the Interior. It appears that the law has remained a dead letter and that no such plans have ever been prepared.

4.18 The gaps in the basic legislation as well as the absence of these important instruments aggravated by piecemeal land valuation methods seriously impede efficient urban management by making it impossible to establish present land use patterns and to formulate and implement a land use policy in urban areas. Whether such a policy were to be carried out through direct public intervention in the land market or by land taxation providing incentives or

^{1/} See Law of the 26th of July 1927, Le Moniteur, of August 8th and 11th, 1927, Nos. 63 and 64.

disincentives, the institutional and data base is not in place. Furthermore, even the considerable existing powers are far from being fully used, as is discussed below. Thus, while it is important to modernize the town planning legislation, it is equally or more important to improve implementation of existing regulations.

C. GENERAL INSTITUTIONAL STRUCTURE AND OVERALL URBAN MANAGEMENT

4.19 Three main institutions have some overall urban management responsibilities. These are the Ministry of Planning, the Ministry of Public Works, Transport and Communications (Departement des Travaux Publics, Transport et Communications-DTPTC) and the municipalities. The Ministry of Planning was created in November 1978 1/ to replace the National Development Planning Council (Conseil National de Developpement et de Planification - CONADEP) and the DTPTC has also been reorganized recently, i.e., in August 1978 2/, when the previous Service d'Urbanisme (SU) was replaced by the Service de Planification Urbaine (SPU) and some of its responsibilities were transferred to other services of the DTPTC. Two of the main actions in urban management have, therefore, seen their mandates amended in the recent past. The following discussion will place those changes into a brief historical perspective.

CONADEP and the Ministry of Planning

4.20 The legal basis for planning at the national and regional level is laid down in various decrees and laws, starting July 1, 1963. 3/ The last enactment which concerned CONADEP, was dated October 14, 1976, and set out the structure and functioning of the Council. 4/ The Council (see Annex for organization chart and composition) was to establish overall development policies and priorities and had a fairly wide-ranging mandate for planning and coordination of the government's local and economic development budget. It directly administered only about one-third of the development funds of national origin and just over 10% of the total development funds and did not have a direct implementation role, but, in principle, all development projects had to be vetted by the Council. The Ministry of Planning as successor to CONADEP no longer has any direct financial responsibility 5/ although it still participates and assists in financial programming and the establishment of the development budget. Its mandate is presented in more general terms than was that of CONADEP and is too recent to present a clear assessment of the other changes that have taken place in the planning machinery through this reorganization.

1/ Le Moniteur of November 16, 1978.

2/ Le Moniteur of August 10, 1978.

3/ Le Moniteur of July 11, 1963, No. 61.

4/ Loi organique du CONADEP, decree of October 14, 1976.

5/ As a consequence, the CONADEP Division II on the Development Budget and Financing is not part of the Ministry of Planning.

4.21 Among the six specialized divisions of the central planning office in Port-au-Prince that was the technical arm of CONADEP, the Division for Regional Planning and Environmental Protection (Division de l'Amenagement du Territoire et de la Protection de l'Environnement - DATPE) was the one most immediately relevant for urban management. Its functions, as set out in the decree of December 31, 1973, 1/ were:

- (a) to collect, evaluate and update basic information on all aspects of land use, land resources and land development;
- (b) to formulate strategies and priorities for development and determine principal geographic growth poles;
- (c) to elaborate structure plans, classification of towns and boroughs according to their function and role;
- (d) to plan and study long-term physical development and to collaborate at national and regional level in the implementation of projects identified in this framework; and
- (e) to assist and cooperate directly and continuously in the elaboration of regional plans, urban development plans and physical area-planning projects.

4.22 In the same way as the overall mandate of the Ministry of Planning compared to that of CONADEP, the new mandate of DATPE appears less precise than its predecessor. DATPE is expected to define the regions in the country, undertake studies and formulate strategies concerning regional decentralization and development and the spatial distribution of population and (socio-economic?) activities. DATPE is called upon to make recommendations concerning environmental protection and, concerning urban development more specifically, is to keep abreast of work on urbanization within the country. The latter formulation seems to indicate that the urban planning function is to be carried out primarily in the DTPTC (see below). While this appears to be a useful clarification, only time can tell how the new DATPE mandate will be interpreted in practice.

4.23 Through its analytic and strategic role in regional development and decentralization, DATPE will remain an important force in urban development in Haiti. It is, therefore, worthwhile to recall its past activities in this field including the Director; the Division had a total staff of 20 people in 1977, 11 of which were professionals, and was organized into four sections on regional planning, urban planning, studies and graphics. All staff were concentrated in Port-au-Prince. Regional offices of CONADEP were foreseen by the basic legislation but were not actually established. 2/ At the beginning,

1/ Le Moniteur, February 21, 1974.

2/ The law establishing the Ministry of Planning (op. cit.) creates a Directorate of Regional Services (Direction des Services Extérieurs), and specifies that regional offices are to be created according to needs (Article 14).

activities of the division were centered on the preparation of a development plan for Port-au-Prince and its metropolitan region 1/, a study which had started before DATPE was put in place. The UNCHBP-assisted 2/ project was carried out for the Haitian government by DATPE and the Service d'Urbanisme of the DTPTC, with important assistance from foreign consultants. Since July 1, 1977, it is being followed by another UN technical assistance project to reinforce the urban planning section of DATPE with particular regard to immediate action projects, the development of functional zoning and related infrastructure needs and the coordination of financial aspects of the development of the metropolitan region and other regional centers. 3/

4.24 The plan for the development of Port-au-Prince and its metropolitan region has not, so far, been given overall consideration by the government. Copies have not been widely distributed and there is no established procedure for the approval of such a document. Some features of the numerous proposals made in the plan, in particular the creation of what amounts to the nucleus of a metropolitan development authority for the capital, appear to have been implicitly rejected by the government. The status of the plan as a whole remains uncertain.

4.25 DATPE has, however, developed three projects in greater detail, partly on the basis of the plan. These are the St. Martin slum rehabilitation and Drouillard sites-and-services projects financed by UNCDF (see Chapter III, Section A) and a project for the development of the Delmas area, which may attract foreign assistance from the German Federal Republic for part of the roadbuilding investment foreseen. Such detailed plan preparation, especially in the area of housing, was and is not part of the legal mandate of DATPE.

4.26 In addition to these activities in the metropolitan area, DATPE has also done some work on intra-urban planning and on defining planning regions for the country. In November 1977, the staff of the Division for the first time visited a regional center, i.e. Hinche in the central plateau region, which has been chosen for the first regional planning effort. The actual work will be carried out with foreign financing and technical assistance.

4.27 While DATPE had the authority to formulate strategy, elaborate schemes, prepare long term plans at the national level, etc., the legislation did not specify procedures for linking this division with the sectoral departments and the economic and financial divisions of the planning machinery. The

1/ Plan de Developpement de Port-au-Prince et de sa Region Metropolitaine, op. cit. Phase III of the plan consists of 14 volumes, of which six deal with sectors, six with immediate action projects and two are summaries.

2/ United Nations Center for Housing, Building and Planning.

3/ Based on the UN project document No. HAI/77/007/A/01/01. In the light of new mandates for DATPE and the Town-Planning Service of the DTPTC, it is not clear that this project helps the right service.

powers of DATPE were therefore relatively limited and it could find itself producing plans and studies that had little or no relevance for or influence on the investments which actually took place. DATPE was and remains subject to the general factors that weaken institutional performance in Haiti and much of its work has gone forward because of substantial foreign assistance and could not be carried on without such expatriate involvement.

DTPTC

Service d'Urbanisme and Service de Planification Urbaine (Town-Planning Service)

4.28 Under the 1971 organic law of the Department of Public Works, Transport and Communications, provision was made for the establishment of a Town Planning Service as one of the specialized services of the department. ^{1/} The Service belonged to the Directorate of Studies, the other directorates being concerned with Administration, Control and Supervision, Physical Planning and Departmental and Communal Services (see Organization Chart in the Annex). While many other parts of the DTPTC and institutions under its supervision had functions related to urban services, etc., the Service d'Urbanisme had the main responsibilities in overall town planning matters.

4.29 In the overall framework of the 1937 Town-Planning Law, the Service was charged with:

- (a) the preparation of plans for the development and improvement of urban and rural centers;
- (b) the study of the construction and maintenance of public buildings; and
- (c) the control of construction, repair and extension of all private properties, both residential and commercial.

This involved giving technical advice to the municipalities on the approval of construction permits, the control of unauthorized constructions, the approval of road layouts, private subdivisions and plans for reconstruction following a natural disaster. The service has undertaken the physical planning and construction of low-income housing on behalf of the ONL, the most recent example being the extension of the Cite Jean Claude Duvalier in Port-au-Prince in 1975.

4.30 At the time of the Bank's Sector Mission in November 1977, the Service had a staff of some 20 architects and engineers and approximately 30 lower level personnel with an annual budget of some US\$90,000. Nineteen of the staff, of which some 13 are inspectors, were charged with the control of private construction in the Port-au-Prince metropolitan area. All the staff of the Service and the overwhelming bulk of its other activities were located

^{1/} Article 9(9) - Specialized Services: Loi Organique du Departement des Travaux Publics, des Transports et Communications, Le Moniteur, No. 48, June 17, 1971.

in Port-au-Prince. Apart from some work underway on recasting the town planning legislation, eight other sizeable projects were underway in the city, involving work on parks and public places, markets, road intersections, sidewalks and the like. The only activity of the Service outside the city was in Cap Haitien, where one officer spent a few days each month to develop town planning capability.

4.31 The venture into Cap Haitien was the first effort of the Service directed at overall town planning. The Service has cooperated with DATPE in the work on the development plan for the Port-au-Prince metropolitan region and has provided some technical expertise for the specific projects in St. Martin and Drouillard developed by DATPE. In general, however, the Service has kept a low profile in urban planning questions, partly because DATPE had tended to preempt some of the work. Together with DATPE, it has benefitted from foreign assistance under the UNCHBP project between 1972 and 1976 but has worked without expatriate assistance afterwards.

4.32 The Service had certain limitations in its role of controlling private construction activity. The absence of a zoning plan and of an appropriate building code obliges the 13 inspectors of the Service to base their judgments on the very general prescriptions of the 1937 town planning law. Not only is this open to widely different interpretations, but the inspectors are not highly qualified and their analysis often remains cursory. In cases where violations were found and injunctions issued, 1/ enforcement powers were and are extremely limited. Only in a few cases is a building or part of it torn down, and the legal basis for this remains doubtful. Often, it is also physically difficult to meet the builders, who may be conveniently absent during the working hours of the Government. As a result, the Service was unable to control urbanization and to ensure the urban infrastructure and service delivery standards laid down in the basic legislation. This aggravates erosion and drainage problems and hampers improvements in solid and liquid waste collection and disposal. (See Chapter III, Section B and Section D of this chapter).

4.33 With the reorganization of the DTPTC in August 1978 2/, the Service d'Urbanisme was replaced by the Service de Planification Urbaine (SPU). The title of the new service contains the word "Planning" and highlights the change in the mandate of the Town Planning Service. The SPU is in charge of all matters concerning the physical and economic planning of urban and rural centers. In close collaboration with DATPE, SPU is responsible for the formulation of objectives and strategies for their development. SPU will also prepare and program projects, control progress in their implementation 3/

1/ Between September 1, 1975 and October 30, 1976, 3,872 injunctions were issued. For the same period, the Service gave its advice on 376 construction permits.

2/ Le Moniteur, August 10, 1978.

3/ Similar responsibilities in following and controlling projects are given to the Direction de Controle et d'Evaluation of the Ministry of Planning (Article 12 of the mandate). This introduces a new overlap in mandates.

as well as revise their budgets, and it is in charge of establishing norms for land use, urban infrastructure (including garbage collection, sewerage and drainage) and for commercial, industrial and residential building.

4.34 The SPU, is however, relieved of all executing functions previously assumed by the SU (see para 4.29 (b) and (c) above) which are transferred to the Service de Genie Urbain 1/ (Urban Engineering Service). Detailed control of urban development will be the responsibility of this service, while the SPU can devote all its energies to the functions of planning and norm-setting. Only time can tell how this reorganization will work in practice and, in particular, whether the Urban Engineering Service will be given the means to do better than the old SU in the control of urban development (see above).

Programming Unit

4.35 The new organic law of the DTPTC also specifies the mandate of a programming unit (Unit de Programmation - UP) which is to ensure the coherence of the objectives of the different services of the Department and of the various autonomous bodies under the Department's supervision. In the framework set by the planning machinery, the UP prepares five-year and annual plans in the areas of public works and urbanization, transport, energy, drinking water and communications. While the division of labor between the SPU and the UC with respect to urban planning will need further elaboration, the coordination of the wide-ranging activities of the DTPTC and its subsidiary bodies through the UP is of great potential importance for the efficiency of urban management.

The Municipalities

4.36 According to the Constitution, 2/ the communes are autonomous, subject to limitations established by law. Between 1964 and 1970, five towns in the country received complete financial and administrative authority by decree. By 1971, however, all these decrees were repealed and communal commissions were set up consisting of a mayor and two assistants. 3/ The Bank mission was unable to secure good information on the structure, functioning and responsibilities of these bodies. Generally, it appears that they have little or no technical staff at their disposal and that their activities, apart from their political functions, are largely confined to certain partial maintenance functions with little or no planning, managing or coordinating authority.

4.37 Some information is available on the Port-au-Prince municipality. The office of the major has 250 staff on monthly payroll, 4/ divided into some 10 divisions, of which five have some substantive functions, the others

1/ Formerly called Service de Genie Municipal.

2/ Constitution of the Republic, 1964, amended in 1971.

3/ Law of July 12, 1971.

4/ Plus some 570 regular daily paid workers and the possibility to hire 200-500 more to deal with floods.

providing support and general statistical and accounting services. The substantive functions cover collection and disposal of garbage, general inspection services, administration and maintenance of municipal schools, asylums, dispensaries and cemeteries, issue of building permits, ^{1/} and identification of concrete block buildings for tax purposes. Most of the staff have administrative rather than technical skills which severely restricts the efficiency of the municipality's interventions. Generally speaking, the role of the municipality is confined to selective urban service delivery with no influence on the city's growth and development. The situation is certainly no better in the provincial towns.

4.38 Not only the responsibilities of the municipalities are restricted, their financial position is also precarious. Table IV-1 shows the revenues and expenditures of selected municipalities in 1975/76. The Port-au-Prince figures are not fully comparable because both total receipts and total expenditures are budget figures and not actuals, as for the other municipalities. The buoyancy of municipal revenues cannot be fully assessed for any length of time but Annex Table 4.1 shows that the tax part of the revenues is growing very slowly, even without the depressing effect of the abolishment of the market transaction tax (see below). In real terms, revenues from local taxes are falling. Municipal tax collection suffers from shortcomings and substantial deductions from the amounts collected. Rental value is assessed by low-paid officials and the Mayor of Port-au-Prince estimated that about 5,000 high income residences in the city escape valuation altogether and pay no local tax. Of the amount collected, deductions are made for the collection service and, in much larger amounts, for transfers to other Government accounts. Together, these can amount to as much as 50% of the amounts collected. Better valuation and collection procedures and the elimination of deductions other than for the collection service would provide a very substantial boost to municipal budgets.

Table IV-1: RECEIPTS AND EXPENDITURES OF SELECTED MUNICIPALITIES IN 1975/76

<u>Municipality</u>	<u>Receipts</u>		<u>Expenditures</u>	
	Total 1000 US\$	Of which: local taxes 1000 US\$	Total 1000 US\$	Per head of 1975 population US\$
Port-au-Prince	1,283	731	1,283	2.06
Cap Haitien	69	44	68	1.28
Les Cayes	51	21	45	1.82
Jacmel	31	13	31	2.50
Gonaives	48	17	45	1.32

Source: Ministry of Finance and Port-au-Prince municipality.

^{1/} After review and advice by the DTPTC.

4.39 After deductions, about 55% of municipal revenues comes from taxes earmarked for the municipalities and collected on their behalf by the Ministry of Finance. These are a tax on the rental value of built-up properties and a license tax on commercial, industrial and professional enterprises. Until 1974, there was also a tax on market transactions, but this was abolished by the Government. The remainder of municipal revenue consists essentially of government grants from the Departments of the Interior, Public Health and Public Works, including compensation for the abolished tax on market transactions. Municipal fees account for the rest.

4.40 At present budget levels, the bulk of the expenditure goes to wages and salaries and related costs. In the 1976/77 budget of Port-au-Prince, for example, only just over 10% is available for the purchase of equipment and materials or a little more than 20 US cents per inhabitant. ^{1/} The situation is likely to be no better in the provincial towns, although detailed data is not available. Even for the small amounts available for other than obligatory current expenditures, the provincial town administrations have to get spending authority on a case-by-case basis from the central government.

4.41 Given their poor financial status, the lack of technical expertise and the severe limits on local decision-making and spending authority, it is not surprising that the municipalities are in a state of near-paralysis. This is most noticeable in overall town planning activities but also affects the discharge of municipal responsibilities in urban maintenance and service delivery. Whether the municipal elections planned in the next 18 months will provide the springboard from which the municipalities might be revitalized remains to be seen.

D. URBAN EMPLOYMENT PROMOTION INSTITUTIONS

Manufacturing

4.42 The development of the manufacturing sector is, in principle, the domain of the Ministry of Commerce and Industry (DCI). In practice, the Ministry does little more than prepare the licensing of new industrial enterprises and participate in the commission that recommends the granting of fiscal incentives to eligible candidates. The implementation of the wage legislation is the responsibility of the Ministry of Social Affairs. The DCI's responsibilities do not cover the construction industry and it does not intervene in questions of vocational and professional training, except perhaps if asked to do so by entrepreneurs. DCI has no regional offices.

^{1/} This compares with, for example, the budget of the municipality of Jakarta which, in 1976/77, amounted to a total of US\$34 per person with payroll and maintenance expenditure accounting for less than 27%. Nearly US\$25 per person were available in Jakarta for materials, equipment and other development expenditures, i.e., about 150 times the Port-au-Prince level.

Even in its limited activities, the DCI keeps no systematic records and there is no monitoring activity of investment, employment, etc., once an enterprise has been licensed. The chronic shortage of qualified administrative and technical staff is partly responsible for the inability of the Ministry to develop an overall industrial policy, and its programming unit, set up for just this purpose, has worked only sporadically in the past, such as for the preparation of the five-year plan. The manufacturing section of the plan, however, is little more than a list of projects on the books of the IDAI and its subsidiaries plus some suggestions for private sector projects.

4.43 Since June 1977, a small industrial promotion office (BHPI) is functioning under the aegis of the Ministry and with financial and technical assistance of the Federal Republic of Germany. Its functions are to identify promising projects either for new investment or for rehabilitation and expansion, to establish links with foreign investors and know how and to provide technical assistance. Eventually, the office should prepare feasibility studies. The BHPI has presently six professional staff, including the Director and the Co-Director, some supporting staff and a small consultants budget for technical assistance and training. All staff work in Port-au-Prince, but BHPI hopes to open a branch office in Cap Haitien. The BHPI has got off to an energetic start and has already identified some concrete projects, for which interested foreign participants, mostly from Germany, have been found. Discussions are under way with the German Government about giving the Office a financing capability which would complement the promotion services it can offer. A very similar industrial promotion effort is to be mounted as from 1979 with UNIDO assistance in the DCI and an UNCTAD expert has been placed in the Ministry to develop commercial policies with particular regard to encouraging labor intensive export industries. It is not clear why these efforts could not be combined in one operation. Beginning in July 1978, UNIDO also intends to train industrial promotion officers of small and poor countries, among which Haiti, for eventual attachment to embassies abroad.

4.44 Industrial promotion is also in the mandates of other institutions, that do not fall under the supervisory responsibility of the DCI. For example, Division V of CONADEP, the Development Project Promotion Division (Division de Promotion des Projets de Developpement-DPPD) is supposed to generate project ideas, develop them through the feasibility study stage and find suitable investors. Here again, staff shortages are one of the reasons why the Division has so far only developed a roster of past, present and future projects and has not developed new projects or carried out feasibility studies. IDB is now planning to provide assistance to CONADEP in project identification and evaluation. INAREM, an autonomous organization which is not under DCI, has responsibilities in the development of projects based on mineral resources.

4.45 Similarly, the IDAI with its subsidiaries was also set up to promote industrial projects. IDAI is the only existing institutional source of medium- and long-term industrial finance in the country. It is not under the direct supervision of the DCI, although DCI is represented on its Board of Directors. BNRH supervises its assets. IDAI, which had a total staff of 394 at the end

of 1976, is financed from a share of customs receipts (over 86% of current income in 1975/76), its own financial income (less than 14% of current income in 1975/76) and external loans from the IDB. Its lending activities have been affected by long delays in loan approval and by inadequate project appraisal and financial management. 1/ The organization has been in persistent financial difficulties and, at the end of 1976, payments in arrears amounted to 48.6% of its total portfolio, with agricultural loans in arrears by 73.8%, direct industrial loans by 45.3% and loans to its subsidiary, Societe d'Equipe National (SEN) in arrears by 37%. As part of a recently approved IDB loan, IDAI will receive technical assistance and has undertaken to reduce its delinquent accounts to 10% of the total portfolio by the end of the fourth year of the proposed lending program. 2/ IDAI has four regional branch offices but they have not so far handled any industrial lending.

4.46 Most of IDAI's industrial lending takes place through its subsidiary, the SEN. This company can make direct investments but is obliged to sell its participation in any profitable enterprises to the public. SEN was to identify new projects, appraise them and find interested investors but has not done so for some years. Many of its ventures operate at a loss or have ceased to function. Another subsidiary of IDAI, the Societe Nationale des Parcs Industriels (SONAPI) builds and manages industrial zones in the country. The only industrial zone now operational is in Port-au-Prince. It offers either serviced land on lease to potential investors or standard buildings it constructs itself for rent. Presently, six standard buildings of 2,400 m² each have been constructed and fully rented by SONAPI and the construction of four new buildings has just been decided to meet part of pending demand for space. Two buildings have also been built by outside investors leasing only serviced plots. By the time the four new buildings are finished, SONAPI will thus have realized about 36% of the first phase objectives fixed for the estate. Faster development has been hampered by construction delays and by the high cost of rental space on the estate, which at US\$1.05 per sq.ft. for the new buildings is well above the US\$0.60 to US\$0.70 per sq.ft. on adjacent privately developed sites. Plans for the industrial zone in Cap Haitien have been postponed for lack of finance and qualified staff. However, at the end of 1978, the government has requested assistance from IDB to conduct a feasibility study for an industrial estate in Cap Haitien.

1/ An industrial loan application from Les Cayes took one and a half years to process until disbursement, and the collateral required was three times the requested loan amount.

2/ IDB: Haiti, Industrial and Agricultural Development Program, HA-0020, loan proposal, undated; circulated to Board of Executive Directors on August 23, 1977.

Handicrafts

4.47 The institutional arrangements for the promotion of handicrafts are even more complicated. Until autumn 1977, four ministries had services involved in craft development, i.e., the Ministries of Commerce and Industry, Social Affairs, Agriculture, Natural Resources and Rural Development, and the Ministry of Education. In September 1977, 1/ the National Crafts Office was created and in August 1978, it was formally inaugurated. It has a very wide mandate for supporting crafts development ranging from technical, financial, marketing assistance and training to stimulating, through community action, shelter improvement, potable water supply, schools, dispensaries, etc. 2/ The office is organized in four sections concerning inspection, craft development, credit and rural handicrafts. It will also take over the running of some publicly sponsored craft workshop and is expected to have at its disposal about a dozen qualified staff. A request for a budget is pending with the Ministry of Finance. It is not envisaged that present staff working on crafts in the Ministries will be transferred to the Office. Unless these crafts sections cease to function, the Office will either have to limit itself to a coordinating role (which is in contradiction with large parts of its mandate) or it will simply increase institutional confusion.

4.48 In budgetary terms, the Crafts Office is part of the Ministry of Social Affairs but is governed in its daily operations by a National Crafts Council. That council has already met a couple of times and consists of five representatives of the four Ministries mentioned above and the Ministry of Planning, two representatives of the private commercial sector and two representatives of the crafts producers. The non-governmental representatives from the council have not yet been officially nominated and their role is not specifically spelled out.

4.49 In addition to these official institutions, a large, unspecified, number of private organizations are active in crafts development. These range from purely commercial organizations to the numerous NGO's active in Haiti. Many of them have training activities attached to their production efforts. The non-profit but economically self-sufficient Comité Artisanal Haïtien, for example, sells the output of 19 production-cum-training centers in the country. Others focus on developing markets for Haitian crafts, like the Association pour le Développement de l'Artisanat, which was created by businessmen and the Rotary Club with government support. Overall, however, the development of overseas markets is left more to chance and special connections then based on a comprehensive policy or institutional responsibility.

Vocational Training

4.50 In Chapter II of this report, shortages of skilled manpower were emphasized as a serious obstacle to industrial and crafts development. Technical and vocational training is thus of considerable importance. Three

1/ Decree of September 12, 1977.

2/ The latter parts of the mandate raise possibilities of conflict with other government departments.

Ministries have sizable involvement in these activities. In addition to all institutions of higher education, the responsibility of the Ministry of Education includes craft and apprentice centers, the Ministry of Agriculture has rural craft training centers, and the Ministry of Social Affairs runs craft and industrial worker training, mostly in Port-au-Prince. The Ministry of Commerce and Industry is only marginally involved with a small handloom training center in its headquarters in Port-au-Prince. 1/ In addition, there is a large number of technical and vocational training schools which are presently independent of these Ministries. Some are semi-public, like the vocational training center financed by Canada, the CCHFP, 2/ others are run by private organizations, often church-based. There may be some 70 technical and vocational training schools in urban areas, of which 16 are public and about 55 are located in Port-au-Prince. Unknown members of rural centers would have to be added for a complete picture. 3/

4.51 The type and quality of training offered differ widely between these institutions. Most suffer from lack of qualified teaching staff and a severe shortage of training equipment and materials. Curricula are not standardized and not related to an overall manpower development policy nor, in most cases, to the specific requirements of industry. The only exception that could be found is the CCHFP, where industrialists have a say as to the trades being taught and participate financially in training costs. This Center trains car and diesel mechanics, electricians, electronic technicians, refrigeration specialists and may add store management courses. It was created in 1974 and offers three to four years courses to a total student body of 180 to 200. Even this center, however, operates in relative isolation from other vocational training efforts.

4.52 Some of these issues are now being addressed through the National Vocational Training Institute (INFP-Institut National de Formation Professionnelle). This Institute, created under the auspices of the Ministry of Education with foreign assistance from the ILO and France, is set up to evaluate skilled manpower requirements in industry, develop programs and teaching materials, train teachers for public training schools and generally reorganize and support the vocational training effort, including that carried out by industrial enterprises themselves and by the rural crafts centers. The INFP is now laying the basis for fulfilling this mandate. In September 1977, it started an inquiry into the present skill levels and skill structure of industrial employment, the size and composition of employment and the expected skill requirements in the future. The inquiry, which is carried out in close cooperation with CONADEP and the IHS, is expected to provide the basis for an industrial manpower development policy which is then expected to lead to proper curriculum development for the identified priority training needs. In the meantime, with the pilot training school directly attached to it, the INFP is planning to reorganize rural crafts training and may shortly create nine rural crafts training centers with help from ILO. Its coordinating function, however, will take considerable time to be developed and accepted.

1/ This Centre has been transferred to the Office National d'Artisanat.

2/ Centre Canado-Haitien de Formation Professionnelle.

3/ USAID has recently started a survey of vocational training institutions with a view to supporting a program to teach sub-professional engineering trades.

E. URBAN SERVICE DELIVERY INSTITUTIONS

Shelter

4.53 The two main institutions that are or may shortly be active in public shelter provision are the ONL, and the BDL. In addition, Divisions III (DATPE) and V (DPPD) of CONADEP and the Service d'Urbanisme of the DTPTC have been or are involved in certain aspects of public shelter provision.

4.54 The ONL was created in 1966 as a semi-autonomous agency attached to the Ministry of Social Affairs. Its legal mandate includes the following main functions: 1/

- (a) maintain and manage all housing projects built by Government;
- (b) carry out socioeconomic studies and research necessary to establish housing needs and priorities for the country;
- (c) construct and promote construction of low-cost housing for families with modest incomes;
- (d) develop and establish norms and criteria to be used in the pursuit of these objectives;
- (e) establish precise criteria for the allocation of housing types and the methods of accession to private property; and
- (f) obtain guaranteed loans for housing development with prior authorization from the Minister of Finance.

4.55 On paper, the responsibilities of the ONL include most of the elements required to execute a low-income housing policy, although the development of housing policy as such, low-income or otherwise, is not part of its mandate. In practice, however, ONL's activities have been confined to the maintenance and management of housing projects planned, built and financed by other state agencies (see Chapter III), and its staff has not been directly involved in planning, programming, finance or construction of shelter. Consequently, ONL has acquired very little experience in housing development over the 11 years of its existence.

4.56 The Office has 39 employees, all but one located in Port-au-Prince. Only three of its staff are engineers. The office works with a current budget of US\$120,000, half of which is for payroll expenses. The budget is financed from the declining mortgage payments collected for the ONL by the Administration Generale des Contributions and from Government subsidies which vary from year to year. Recently, the Government has institutionalized the subsidy, which now comes from a US\$0.10 charge on land transactions and a share of 1.2% of

1/ Decret creant l'Office National de Logement, Le Moniteur, No. 19, March 7, 1966.

the national rental tax and provides about US\$60,000 per annum. To compensate for declining mortgage payments, the ONL has now started to collect voluntary contributions for maintenance purposes from families residing in its housing projects in Port-au-Prince. The small investment budget of the ONL (US\$114,000 in 1976/77) is drawn from special allocations of other public agencies.

4.57 Recognizing its own deficiencies, the ONL has requested technical assistance and a financing base which would permit it to upgrade its managerial and technical capacity and to establish clear and coordinated relations with the DTPTC, CONADEP, the BDL, etc. Little, if anything, has yet been done for the ONL although considerable assistance in the housing field has been obtained by the other three agencies. Unless the ONL receives such assistance, it will remain unable to expand its activities beyond their present range.

4.58 Recent developments make it possible that the ONL will benefit from substantial technical assistance through the low-income shelter projects financed by UNCDF. In fact, it has now been decided that the project team in charge of implementation will be placed into the ONL. Initially, plans were drawn up for a separate institution and the management structure of the projects still reflects that concept. It is complex and has three levels. 1/ At the top is a Management Council consisting of representatives of the Ministries of Public Works, Social Affairs and Finance, the BNRH, the Plan, the Mayor's Office and undesignated members of the private sector and community representatives. Below this is an Executive Committee consisting of representatives of the Ministries of Public Works and Social Affairs, the Plan, ONL, the Mayor's Office, UNDP, private voluntary organizations and the project manager and his counterpart. Finally, there is a Technical Service Unit divided into three divisions: Cooperative and Community Development, Technical Services, Finance and Administration. It would consist of 30 Haitian staff, five UNDP experts and two associate UN experts or expatriate volunteers. Following the decision to place the implementation unit into the ONL, this management structure will be reviewed and, hopefully, streamlined. Also, the full integration of the project unit into the ONL as soon as possible would be most desirable to ensure a lasting impact of the large technical assistance element on the capabilities of the ONL.

4.59 Institutional uncertainty in shelter provision is being increased by the creation of the BDL. A first attempt at creating the BDL was made in 1972 2/ but was not carried out, partly because of opposition from parts of the Government, apparently including the Ministry of Social Affairs and ONL. The first attempt was superseded by a second law in 1974. 3/ According to this law, the BDL is created to promote private property access for middle-income classes in the population and to improve the housing conditions of low-income families.

1/ Draft copy of UNDP project report, November 1977.

2/ Le Moniteur, 127th year, No. 77-A, November 1972.

3/ Le Moniteur, 129th year, No. 66, August 1974.

4.60 Some of BDL's functions are clearly different from those of the ONL, such as the creation of savings and loan mechanisms, preparation of loan guarantees and the supervision of private home savings and loan associations. Other functions, however, clearly overlap with the mandate of ONL, such as:

- (a) construct housing for rent or sale to low-income families;
- (b) determine physical design and financial standards for low-income housing;
- (c) maintain and manage all housing built by the BDL; and
- (d) establish allocation policies and determine methods of property acquisition and transfer, etc.

4.61 Most of the low income housing activities of the BDL are to be carried out by its Departement d'Interet Social. The law stipulates that, once the funds at the disposal of this department reach US\$200,000, the department will take over the accounts and housing under the current jurisdiction of the ONL. Since the finance for this department will come from 10% of the BDL's profits, this may take 10 to 15 years. Government officials appear divided on the merit of this stipulation and some feel that this department of the BDL is redundant, that the funds earmarked for it should be made available to ONL at low interest rates, that the ONL should remain an independent institution and that it should be given exclusive responsibility for building and administering housing for families with incomes below US\$200 per month. Whatever the solution finally adopted, it seems important that the problems of overlapping responsibilities and the institutional relationships between the BDL and the ONL be resolved as early as possible.

4.62 The management of the BDL is in place. The Board of Directors will consist of the Minister of Finance, the Minister of Social Affairs and the five members of the Board of Directors of the Banque Populaire Haitienne (BPH). The BPH, a small institution salvaged by the BNRH from a bankrupt predecessor, the Banco Colombo, will manage the BDL. The Director of the BDL and five senior staff are already employees of the BPH. The senior staff have been on a six-week training course in the Dominican Republic and have received technical assistance in Haiti from the OAS, which was generally involved in the setting up of the BDL.

4.63 The start-up of the BDL's operations has, however, been delayed by difficulties in finding the starting capital. Of the authorized capital of US\$5 million, the BNRH was supposed to supply US\$1 million. The remainder was to come from 10% of the net profits of certain unspecified autonomous public agencies, loans for private and other public sources, including the ONA, issue of negotiable bonds, etc. The contribution from the BNRH is, so far, limited to the transfer of a 10 ha property in Diquini valued at US\$400,000, the hoped-for ONA contribution of US\$1 million has not materialized, and the promised finance from private commercial banks has been held up by the question of guarantees for its servicing and repayment.

4.64 Partly due to the past inability of ONL to fulfill its mandate, other institutions have also been active in housing. In the preparation of the five-year plan, DPPD of CONADEP noted that the ONL program in housing was weak and prepared a five-year housing development program to avoid the embarrassment of having a plan without a shelter component. Despite some low level technical cooperation between DPPD and ONL, this was basically an independent technical operation. The national plan now indicates a US\$23.4 million investment in housing and designates the ONL as the executing agency, but the ONL had little or nothing to do with its preparation, does not have the means to carry out this level of activity and has its own preferred project worth US\$13 million (prepared by a private developer) which does not appear in the plan. The projects identified by DPPD are not carefully thought out, and the work was done completely by foreign consultants.

4.65 As was mentioned before, DATPE has also been active in housing project preparation, although this was not part of its legal mandate. Foreign experts contributed significantly to this work and the capacity of DATPE to carry out further project preparation work of this type without external assistance is in doubt. Finally, the Service d'Urbanisme of the DTPTC has been active in shelter questions on the technical level. The Service has undertaken technical studies, contracting and supervision for the ONL, including community facilities, roads, drainage works, etc. It has also provided technical analysis services to DATPE in the preparation of the UNCDF projects. While being weak in financial and economic evaluation, the Service has long experience in the architectural and engineering facets of project preparation and in contracting and supervision. Some of the staff have been informally trained (through the UNCHBP program) in low-income housing and the site and services approach. Most important, the Service was the first public agency to support the approach and to argue seriously in favor of a full cost-recovery agenda in any low-income shelter program. Under the impulsion of the Director, the Service had begun tentative studies of simple sites and services projects in 1977. 1/

Environmental Management

4.66 The interrelated issues of erosion, drainage, solid and liquid waste removal directly and indirectly affect the responsibilities of a number of public agencies. With respect to erosion above Port-au-Prince, but also in other parts of the country, the Service de la Conservation des Sols in the Division of National Resources of the Department of Agriculture is supposed to prevent deforestation and to control land use to minimize erosion in rural areas. The Morne l'Hopital, for example, is defined as a rural area and the Service works on the basis of a comprehensive set of regulations for controlling land use on the mountain. Despite the existence and evolution of the legal basis for intervention over 50 years, 2/ it is evident that the Service with its seven agents responsible for the six

1/ See Chapter V for more detail.

2/ Since 1926, some 15 generally relevant laws and six laws dealing specifically with the Morne l'Hopital have been enacted.

watershed zones on the mountain has failed in its mission, for reasons related to technical and administrative competence, lack of cooperation from property owners and tenant farmers, lack of effective enforcement powers, insufficient personnel and resources, and the absence of real central government concern about the problem.

4.67 Occasionally, the Service has undertaken works to reduce erosion runoff from the upper reaches of the mountain. The works such as check-dams in ravines and natural terracing with "vetiver" were started in 1948 and repeated several times thereafter. The construction of additional dams with food for work labor in 1975 quickly aborted when large-scale property owners resident in the city objected to public incursion on their lands. The capital projects undertaken to date have had little, if any, effect on erosion and runoff into the city's drainage system.

4.68 The Service de Genie Municipal ^{1/} of the DTPTC also has a vaguely-termed mandate to "control" hydrographic basins which may affect runoff in the city. More importantly, it is the main agency responsible for construction and maintenance of the drainage system, streets and bridges. At present, the Service has a regular staff of five supervisory engineers and 30 other technicians and foremen receiving a combined annual salary of US\$59,000. It also spends about US\$200,000/year for purchase of labor service from 300 to 500 day workers, of which 100 to 120 may be involved in the maintenance of the drainage system during dry periods, and the full 500 during the rainy seasons.

4.69 The service is involuntarily involved in solid and human waste removal. Through inadequate collection of solid waste and inadequate human waste disposal facilities, significant amounts of waste end up in the drainage system and contribute to the obstruction of the storm sewers and canals. Part of this waste is removed through the clearing operations of the service. However, since dry season clearing is quite inadequate, much of it gets flushed out of the system during the rainy periods, especially in the low-lying areas of the city. Mud and debris flushed out of the drainage system are no longer the responsibility of the Service de Genie Municipal and the Service de Voirie and the Service de Controle of the municipality have to collect and dispose of it. Waste that becomes the responsibility of the Service de Genie Municipal upstream by default of the Voirie and Controle is part of what is passed back to the latter for collection and disposal downstream.

4.70 The Service de Voirie et Transports of the Port-au-Prince Municipality is responsible for removal of domestic waste, the cleaning of streets, and the transport of waste collected by other agencies. Similar services in Petionville are carried out separately by the municipality of that city. The Service de Controle, also of the city administration, is responsible for

^{1/} In the reorganization of the DTPTC, this service has been renamed Service de Genie Urbain.

cleaning public places such as parks and monuments, the area of the bicentennial exposition on the waterfront, the urban produce markets, the airport road, the cemeteries and the municipal asylum. The service is supposed to concentrate waste produced in these areas at designated points, where trucks of the Voirie can collect it for disposal.

4.71 Between them, the two municipal collection agencies have a total salaried staff of 98 costing some US\$114,000 and annual payroll allocations of about US\$300,000 for the payment of 30 additional supervisors and some 540 day laborers. The Service de Voirie also has an annual budget allocation for vehicle operation and maintenance of US\$64,000 and can draw on another municipal account for the purchase of equipment and materials. Much of the equipment of the service is inappropriate or out of order which severely affects the efficiency of the operations. The Service has recently contracted with a private company for the removal of some of the solid waste at unit costs below its own. When extraordinary storms hit the city, as was the case in October 1974, the pool of personnel and equipment can be expanded by Presidential Decree authorizing the requisition of equipment and personnel from other Government agencies and the private sector.

4.72 The Public Hygiene Division of the Department of Public Health is also involved in solid and human waste problems. Until 1973, this agency was responsible for solid waste removal in all towns. Since then, this responsibility was transferred to the municipal agencies in Port-au-Prince and Petionville but the Division remains responsible for solid waste collection and disposal in the provincial towns. In Port-au-Prince, the Division has 107 inspectors who are responsible for educating the population in methods of waste disposal (human and solid), to check on human waste disposal facilities and to create neighborhood sanitation committees which, inter alia, attempt to improve waste disposal habits by identifying appropriate local dumping areas and disposal techniques such as burning. The Division operates independently and communication does not appear to exist between the Hygiene Division and the other agencies in the city. 1/ Other than the 1937 urbanization law mentioned above, the inspectors have no fixed criteria and judgment on the adequacy of facilities is left to them. There is no provision for enforcement of their recommendations 2/ and compliance is left to the discretion of property owners. The Division also has a human waste removal service in Port-au-Prince with two tanker trucks and a crew of 20 laborers that remove sludge for a fee of US\$25-30 upon demand of property owners.

Water

4.73 For the Port-au-Prince region, the Centrale Autonome Metropolitaine d'Eau Potable (CAMEP), created in 1964, has the responsibility to ensure water supply, manage the distribution facilities and plan and develop extensions and improvements to the system. It is not, however, responsible

1/ The Service de Voirie appears to be unaware of the standards of public waste collection laid down in the town planning law.

2/ Loi Reorganisant le Departement de la Sante Publique et de la Population, Moniteur No. 68, August 26, 1971.

for protecting watersheds which supply sources and wells. This is the responsibility of the Department of Agriculture with respect to rural zones and the Department of Public Works with respect to built-up areas. In the provincial towns, similar responsibilities are given to the recently created Service National d'Eau Potable (SNEP), 1/ created in August 1977 to replace the Service Hydrauliques that existed since 1892 and the Cooperative d'Alimentation en Eau Potable de l'Arriere Pays (Provincial Drinking Water Cooperative) which was part of the Services Hydrauliques since February 1968.

4.74 CAMEP, which employs 313 persons, including about 100 valve operators, has had an operating deficit in eight out of the last eleven years of operation. If depreciation were included, a deficit would have been shown in all years. In 1976, its operational expenditure was US\$764,000, 94% of which coming from home subscribers. As in previous years, the US\$70,000 loss will be covered by a government subsidy. For the 1977-78 budget year, expenditure, including depreciation and debt service for a US\$7.4 million IDB loan, is estimated to increase to US\$2.47 million with estimated revenues amounting to US\$700,000 and the book loss rising to US\$1.77 million. 2/

4.75 CAMEP is not legally required to be financially self-sufficient, but loss minimization has been considered desirable and efforts are made occasionally to increase revenues. In 1970, for example, on the basis of a survey of all legal and illegal connections, all of the latter were required to start paying fees and revenues increased from US\$250,000 to US\$475,000 within the year. No similar actions have followed. This financial situation has prevented CAMEP from carrying out effective maintenance and repair work.

4.76 However, the major problem of CAMEP appears to be extreme management inadequacy. Weak personnel management capability has thwarted such attempts as have been made to install water meters, identify clandestine connections, oblige valve operators to provide regular service, identify and repair leaks and breaks rapidly, collect water charges consistently, etc. Lack of equipment and parts has hampered repair and maintenance. In the absence of a competent planning and coordination capacity, major development areas have not been provided with trunklines, main pipes are laid just to serve small groups of houses on the periphery of the city, etc. CAMEP makes its own population projections, estimates of consumption, maps of urban development, etc. These are not consistent with similar work done by CONADEP, the Service d'Urbanisme, Electricite d'Haiti, etc. While the city moves in one direction, CAMEP has had a tendency to plan for its movement in another.

4.77 Between 1971 and 1976, CAMEP became vested with a US\$10.1 million capital system financed by the IDB. Given the scale of the system before the IDB intervention, this proved too large and complicated to handle without parallel assistance to develop qualified manpower and management and

1/ While the service is weak in all dimensions of planning, execution and management, it will benefit from the upgrading of water supply and distribution systems in 10 provincial towns under upcoming Bank and UN projects. It is, therefore, not discussed in detail here.

2/ Rapport de Diagnostic, op. cit.

explains a large part of the institutional weakness that permeates all of CAMEP's functions. Technical assistance during this period was limited to consultant services retained by IDB for project preparation and construction supervision and one PAHO engineer to assist in overall planning questions at the upper management level. Assistance to develop manpower and management capability has now become central to improvement in the delivery system for potable water in Port-au-Prince.

Urban Transport

4.78 The management of the urban transport system is spread about a large number of agencies, some of which work closely together while others operate totally on their own. While it is possible to deduce an urban transport policy of a sort from an analysis of the activities of these institutions, there is no explicit overall policy and no explicit program assigned to one or more institutions. Transportation planning and management in the usual sense, either physical or economic, does not exist in Port-au-Prince. As is evident from Chapter III, Port-au-Prince is the only place that presently has any urban transport problems.

4.79 DATPE, although it had no legal mandate to do so, was active in road system planning in the city. It prepared area plans including road alignments and identification of intersections in need of improvement. Some efforts of DATPE were coordinated with the Service d'Urbanisme of the DTPTC which prepared the localized area plans for road and intersection improvements, authorized private road construction and initiated the legal processes for acquiring or reserving land for public road purposes. The Service has coordinated its efforts with the Service de Genie Municipal of the same Department which was responsible for construction documents, cost estimation and actual road construction and its supervision.

4.80 The Service d'Urbanisme has also coordinated with the Service Autonome des Transports (SAT) of the DTPTC regarding the alignments and design requirements for major thoroughfares in the city. SAT was created as a spin-off from the 1975 UNDP/IBRD technical assistance project for preparation for the national transport plan (except in Port-au-Prince) and is responsible for national transport planning. Except for those parts of the national system which are located in the city (e.g., ports, airport, the Northern, Southern and Kenscoff roads), SAT does not have a mandate to plan urban transport facilities. However, since it is the only institution whose staff has had some training in such components of transport planning as traffic counting and forecasting, capacity design, economic and financial feasibility analysis, etc., it provides advisory and evaluative services at the request of the Service d'Urbanisme. Coordination between DATPE and SAT does not appear to exist in any meaningful way.

4.81 Both the Service d'Urbanisme and SAT have coordinated closely with the Service de la Circulation, the traffic police under the Haitian Armed Forces. This Service is responsible for vehicle inspection, traffic management and, together with the Administration Generale des Contributions, the licensing of vehicles and drivers and the control of routes and tariffs of

privately operated public transport vehicles in the city. It maintains statistics on the size and composition of the vehicle fleet, carries out occasional traffic counts, maintains records on accidents, etc.

4.82 The Service National de Commercialisation Agricole (SENACA) of the Department of Agriculture, created in 1976, is responsible for monitoring, evaluating and intervening in the national agricultural product marketing system, including intra-urban goods transport. Some studies in the latter area have been done by IICA, which assisted in the creation of SENACA. The staff has some experience in carrying out commodity flow surveys and tracing price effects of transportation costs changes. Because this organization is so new, coordination with SAT has not yet been built up.

4.83 Specialized responsibilities also lie with the Administration de l'Aéroport International de Port-au-Prince, which operates the airport with a sub-contract to Pan American World Airways, with the Administration Portuaire de Port-au-Prince, which manages the wharfs in the city and the Signalisations Routieres d'Haiti, a semi-autonomous agency attached to the DTPTC. This recently created agency fabricates and installs highway signs and street-name panels which, until 1976/77, were practically non-existent. In a broader sense, the General Tax Administration, the Motor Vehicle Insurance Office, the Customs Administration, the Department of Commerce and Industry and the Presidency all play indirect roles in the de facto national transport policy. Their actions concerning fuel taxes, licensing fees, transaction charges, insurance charges and import taxes all have effects on the growth and composition of the national and urban vehicle fleet.

F. SUMMARY AND CONCLUSIONS

4.84 Basic town planning legislation in the country is in the public health/architectural cast that was typical in the 1930s when it was established. While it was fairly comprehensive then, it suffers from a number of important shortcomings and lacunae, and some of its provisions such as the preparation of zoning regulations and basic layout plans have remained a dead letter. The absence of such basic instruments of urban management as zoning regulations, usable cadastres or an inventory of public real estate make public policies impossible or inefficient.

4.85 A recast of the town planning legislation, now in its beginnings in the DTPTC, should put the legislation in a new mold that better meets the needs of modern urban planning and management. It could provide the vehicle for:

- (a) giving clearer and more precise mandates to DATPE, the Service d'Urbanisme ^{1/} and the municipalities as well as other relevant institutions;
- (b) widening the basis of land use control through policy guidelines for spatial development and a duly approved land use plan; and
- (c) establishing better coordination among the various institutions and better enforcement powers throughout the system.

4.86 The absence of a land use policy and of effective means for implementing it is one of the major gaps in the existing framework for urban management. Procedures for formulating such a policy should be urgently developed. Both the formulation of land use policy and its implementation require a considerable amount of technical work and it is important that one institution should be clearly responsible for it. This institution should have the responsibility for establishing and updating urban cadastres and an inventory of publicly-owned lands, for the management of public lands (acquisition, holding and disposal) and for advising the government on land taxation measures such as betterment levies and land transfer taxes. This will also entail a complete overhaul of the property valuation system with a view to making it more equitable, providing a better revenue base and harnessing it to serve the objectives of sound land use planning through the judicious use of incentives and disincentives. The role of the Administration Generale des Contributions in many of these fields makes this Service the first choice for these activities.

4.87 One specific aspect of land use needs to be addressed urgently, i.e., land use on the Morne l'Hopital above Port-au-Prince. Like many other urban improvements, this is not contingent on more or better legislation,

^{1/} Some progress in clarifying the respective roles of DATPE and the SPU, the successor of the Service d'Urbanisme, has been made in the reorganization of the DTPTC and the creation of the Ministry of Planning.

but is more an implementation problem. A coordination mechanism between the various institutions concerned with land use on the mountain. should be established to implement an integrated program. Adequate legal powers exist and the technical solutions to the problems on the mountain are known. Addressing these effectively will be of overriding importance for any lasting improvement in the city's severe drainage and flooding problems. It will also be a test of the government's willingness and ability to solve a thorny problem with wide ramifications. The problem is now being tackled by the project implementation unit created in the DTPTC for the IDB drainage project in Port-au-Prince (see Chapter III, Section B).

4.88 Implementation problems dominate all of urban management and service delivery in Haiti. The general factors that depress institutional performance are:

- (a) the low status of the civil service. Non-competitive salaries, unclear or non-existent job descriptions and rules for recruitment, promotion, etc., as well as the widespread practice of civil servants to have outside interests make it difficult to attract and retain staff and inhibit the proper discharge of their public duties;
- (b) the excessive centralization of decision-making to Port-au-Prince and, within the various ministries, in the top echelons of the government, which creates very long delays even for routine decisions and fosters apathy at the working level, especially in the provinces. It also makes it difficult to find people willing to be posted in provincial towns;
- (c) the almost ubiquitous plurality of institutions active on the same problems with gaps, overlaps and uncertainties in their mandates, that make it easy to neglect important tasks or to address others that are not or should not be part of their activities;
- (d) the lack of coordination among institutions which is seldom prescribed, leaves too much room for the inclinations or disinclinations of individuals and leads to much parallel efforts, inefficiency and inappropriate actions; and
- (e) the pervasive shortage of skilled manpower at all levels which leaves many institutions understaffed or inappropriately staffed to carry out their appointed tasks.

4.89 Added to general budget constraints, these factors make it advisable to exercise extreme caution in the creation of new institutions. By competing with existing institutions for the limited pool of qualified staff and financial resources, these might simply weaken the existing ones further without improving overall performance. It is more promising to promote institutional efficiency by clarifying mandates, encouraging inter-agency coordination and selective upgrading of the most seriously deficient services.

4.90 There are many opportunities for this type of intervention and some promising places to start from, beginning with overall urban planning. The mandates and activities of DATPE, the relevant services of the DTPTC and the municipalities need to be clarified vis-a-vis each other. Progress in this direction has been made in the recent reorganization of the DTPTC and the creation of the Ministry of Planning to succeed CONADEP. The role of DATPE in urban questions, previously much less circumscribed, is now limited to establishing the planning regions of the country and to studying and formulating strategies for regional decentralization and development and the spatial distribution of population and activities. The Service d'Urbanisme of the DTPTC was succeeded by the SPU which is now the main institution concerned with physical and economic planning of urban centers, the urban project process and the establishment of norms for urban investments. Detailed executing and control functions of the SU were transferred to other services of the DTPTC. A programming unit was also established in the DTPTC to ensure, inter alia, coordination among the various services of the Department and its subsidiary bodies in the provision of urban infrastructure. Such coordination was previously lacking and its establishment is of great potential significance for efficient urban management. It is hoped that the practical application of these reforms will lead to a more rational conduct of urban planning and management.

4.91 Some of the functions now fulfilled by the DTPTC could conceivably also be assigned to the municipalities such as the control and inspection of construction. The municipalities' present role in town planning and infrastructure provision is minimal. An improvement in their position is contingent upon a substantial improvement in their financial base, a gradual devolution of decision-making powers to them and an improvement in their staff qualifications. Municipal reform might pay handsome dividends in terms of more local initiatives, more efficient implementation of development efforts and better balance in regional development. Between DATPE, the SPU and other relevant services of the DTPTC and strengthened municipalities, a consistent urban planning mechanism could thus gradually emerge.

4.92 Whatever the role assigned to the municipalities in the future, they need assistance in carrying out the tasks which they are currently assigned. At the present time, they are largely incapable of even diagnosing their problems although there is awareness that all is not well. Considerable scope exists for technical assistance in reorganizing the offices, in training and upgrading of staff, and in the establishment of proper operational and management systems. Parallel to this, the representatives of the various ministries who are already in place in the provinces or will be posted there should be given wider responsibilities 1/ and should provide, for a start, coordinated technical support to the political representatives. The long term aim should be their integration into regional structures, working closely with their colleagues at the national level, but owing first allegiance to the region.

1/ At least for the DTPTC, this now appears to be accepted policy.

4.93 Other, more specific institutional improvements have been identified as necessary or highly desirable:

- a) the need to clarify the respective mandates and institutional relationships between the ONL, and the BDL and the need to fully integrate the UNCDF project implementation unit into the ONL;
- b) the need to provide some relief to the city's drainage and public health problems by upgrading the solid waste collection agencies of the municipalities, which is now part of the IDB drainage project;
- c) the need to provide management assistance to the Service de Genie Urbain of the DTPTC for better use of its available resources;
- d) the necessity for substantial institutional upgrading of CAMEP prior or parallel to any further extension of the Port-au-Prince water system;
- e) the desirability of involving SAT in urban transport analysis by a suitable extension of its mandate;
- f) the desirability of rationalizing the various industrial promotion efforts, including those in the vital area of professional and vocational training;
- g) the desirability of institutional streamlining in the area of crafts promotion; and
- h) the desirability of making the DCI responsible for developing a data base on the construction industry and providing the support that may be needed.

CHAPTER V: URBAN DEVELOPMENT STRATEGIES AND OPPORTUNITIES

A. ALTERNATIVE SPATIAL DEVELOPMENT STRATEGIES

5.01 The preceding chapters of this report have identified major imbalances in the spatial structure of Haiti between different departments, between rural and urban areas and between the metropolitan area and provincial towns. These imbalances, which have developed over a long time, play a strong role in the spatial dynamics of the country by influencing the behavior of the whole population and the different economic factors. An urban sector strategy has to take them into account and must be designed with a view to the whole system of spatial interdependence in order not to perpetuate or worsen present problems.

5.02 Concern with spatial balance in development is based on two major working assumptions. The first is that overall living standards will rise more rapidly and on a more sustained basis if resources are allocated in a balanced way to both the rural and urban sectors, rather than with a heavy bias in favor of one or the other. The second is that, if urbanization proceeds "too rapidly", the social costs of agglomeration will tend to exceed the undisputed benefits of the process, thus making it an advantage to divert some of the relatively rapid growth of Haiti's capital to the provincial towns.

5.03 While there is some evidence in favor of both assumptions, they cannot be verified quantitatively beyond dispute. There is little doubt that Haiti's decision to put more resources into agricultural development than in the past is right. This would produce some significant spill-over effects on the urban areas, especially the provincial towns, since much of their activity depends on the prosperity of agriculture. Also, greater emphasis than in the past on the development of provincial towns versus Port-au-Prince may not lead to any significant loss in national output since the marginal productivity of a new migrant in the Port-au-Prince informal sector is not likely to be much higher than in the provincial towns. Even if it were, this might be more than compensated for by the likely escalation of the marginal cost of infrastructure and service provision and by other social costs of agglomeration in Port-au-Prince.

5.04 Other, nonquantifiable, costs and benefits associated with urbanization should also be considered. These are generally described in such terms as psychic rewards or stress, pollution, alienation, stimulation, quality of life, etc. Their meaning is real, both in urban and rural areas, but defies quantification. When the chips are down, a spatial strategy cannot be decided on economic and quantifiable grounds alone and is a political decision. This section attempts to illustrate some of the demographic, financial and economic consequences of the political choice of an urban strategy in Haiti.

General Alternatives

5.05 Among Haiti's options for future spatial development, four have been chosen for analysis, i.e., those that:

- (a) allow present spatial dynamics to continue (development under status quo conditions);
- (b) attempt to conserve the present spatial structure by eliminating internal migration by 1996 (forced rural development);
- (c) attempt to reduce rural-urban migration without influencing its direction (realistic rural development); and
- (d) attempt to reduce rural-urban migration and to reorient it towards more balanced urban growth (realistic rural development with balanced urban development).

The second of these four options is not a practical alternative and is included simply for illustration and comparison. All four options have been translated into different hypotheses on future rural-urban and interurban migration between the different administrative units of the country. Assumptions on the natural growth of the population 1/ in different regions as well as on international migration 2/ are the same for all options.

5.06 Rural-urban migration will and should continue in the future. It will, because the capacity of the agricultural sector in Haiti to absorb more labor is already strained and the scope for the creation of non-agricultural employment in rural areas is limited. It should, because rural-urban migration cannot be regarded as an evil but as one factor contributing to socio-economic progress, including progress in agriculture. Thus, the main problem is not rural-urban migration as such but rather its pace and direction.

Demographic Implications

5.07 The results of the demographic projections under alternative hypotheses on internal migration are shown in Annex Tables 5.1 and 5.2 and summarized below.

1/ It is assumed that overall natural population growth will gradually decline from its present rate of 2.2% p.a. to about 1.5% p.a. in the year 2001.

2/ It is assumed that migration from Haiti will remain constant at 20,000 persons p.a. throughout the projection period, a level slightly higher than that reported for 1973.

Table V-1: SUMMARY RESULTS OF POPULATION PROJECTIONS BY SPATIAL STRATEGY
HAITI 1986 AND 2001
(1000's of inhabitants)

Region	1 9 8 6				2 0 0 1			
	I	II	III	IV	I	II	III	IV
Total /1	5,461.2	5,464.4	5,462.6	5,462.6	6,629.2	6,733.9	6,688.4	6,689.5
Urban areas	1,677.5	1,616.2	1,640.0	1,640.0	2,905.5	2,082.9	2,356.1	2,357.2
Port-au-Prince	1,121.4	1,062.5	1,084.9	1,081.9	2,161.3	1,372.5	1,628.3	1,579.4
Other Towns	556.1	553.7	555.1	558.1	744.2	710.4	727.8	777.8
Rural Areas	3,783.7	3,848.2	3,822.6	3,822.6	3,723.7	4,651.0	4,332.3	4,332.3

/1 Totals equal the sum of regional projections. Differences due to regional variations in natural growth rates.

Source: See Annex Table 5.1.

5.08 Under status-quo conditions (Alternative I), rural-urban migration would continue to fuel rapid urban growth, especially in the metropolitan area, where the population would pass 2 million before the year 2000 and reach about 2.2 million in 2001. The share of the urban population in the total would nearly double to close to 44%. Directly and through its effects on age structure and natural growth, this migration process would lead to absolute decreases in the total rural population of about 0.1% p.a. during the 1990's. The fall would occur in the North-West and, most heavily, in the South, where population would fall by 388,000 or 44% between 1976 and 2001.

5.09 It is notable that, under the unrealistic Alternative II of totally eliminating rural-urban migration by 1996, the Port-au-Prince population would still double by that year and come close to 1.4 million at the end of the century. Of equal importance, the strong but realistic rural development effort implied in Alternative III could reduce the metropolitan population at the turn of the century by about 530,000 compared to the unfettered continuation of present trends as in Alternative I. Successful implementation of Alternative IV, by redirecting some of the migration to provincial towns, would reduce the Port-au-Prince population by another 50,000 in 2001. By that year, the difference in the population size of Port-au-Prince, if it grows at historical rates (2.2 million) or if a strong rural development effort plus promotion of provincial towns is undertaken (1.6 million), would be close to 600,000 people, a difference which approaches the present size of the capital. This illustrates the importance of efforts to develop rural areas.

Needs for Employment Creation

5.10 Since the search for work and higher incomes is a key feature of the motivations underlying the migration process, a reduction and reorientation of migration flows must rely heavily on absorbing the labor force in

productive employment at places where people live or should migrate to. Projections of the labor force presented in Annex Tables 5.3 and 5.4 show the number of jobs needed in the different regions of the country. On the assumption, developed in an ongoing ILO project on vocational training, that participation rates will decline gradually, particularly because child labor will diminish with extended and better education, the total labor force in Haiti will increase by some 22,000 p.a. from 1976 to 1986 and by about 37,000 p.a. from 1986 to 2001. Marked differences in regional labor force increases between the strategic spatial alternatives can only be expected in the longer run, since the spatial orientation of a development strategy will take considerable time to become effective. Between 1986 and 2001, depending on the alternative chosen, the number of jobs needed in the Port-au-Prince area varies between 11,000 and 29,000 p.a., that in provincial towns between 5,000 and 7,000 p.a. and that in rural areas between 0 and 22,000 p.a. (see Annex Table 5.4).

5.11 The agricultural sector employs more than 70% of the Haitian labor force, but is characterized by a very low land-labor ratio of less than 1 ha per economically active person, by a high percentage of marginal land under cultivation (about 45%) and by substantial disguised unemployment.^{1/} It is, therefore, highly unlikely and perhaps undesirable, for agriculture to absorb much more labor. Modern activities in manufacturing, construction, commerce, banking, etc., account for only a fraction of total jobs, i.e., about 25% in the Port-au-Prince area in 1975, and much less in the rest of the country. Job creation in these activities has been relatively modest during the past few years, e.g., less than 4,000 p.a. in manufacturing. Thus, new entrants in the labor force will have to make a living mainly in the so-called informal sector, i.e., handicrafts, services, micro-commerce, etc. This applies to urban as well as rural areas, where any additional labor force will have to be absorbed in non-agricultural pursuits. Maximum development in the basic sectors of agriculture, industry and construction is needed to fuel the demand for goods and services produced by the informal sector.

B. OVERALL ECONOMIC AND FINANCIAL IMPLICATIONS

5.12 As pointed out at the beginning of this Chapter, it is not possible to assess fully the costs and benefits of alternative strategic approaches to spatial development. Ultimately, the benefits of a spatial strategy based on strong rural development and reduced urban migration depend on a comparison between the net result of lower social costs and benefits of agglomeration, especially in Port-au-Prince, and the strategy's impact on overall social product. None of these can be adequately measured. This analysis is, therefore, limited to comparing estimated investment costs between the different approaches needed to accommodate the existing and incremental population and labor force by region.

^{1/} See A. Giles: Quantification des Principales Variables du Developpement Agraire D'Haiti, IICA, Port-au-Prince, 1973.

Estimate of Capital Stock

5.13 The investment cost comparison between the different spatial strategies starts with an estimate of the economy's capital stock and projections of the population and labor force. The 1976 capital stock is estimated at about US\$3,250 million, of which US\$1,400 million in infrastructure and US\$1,850 million in directly productive activities (see Annex Table 5.5). 1/ About US\$1,860 million of the stock were estimated to be in urban areas (US\$1,250 million in Port-au-Prince, US\$610 million in other towns) and US\$1,390 million in rural areas. On a per caput basis, infrastructural equipment is estimated at about US\$300, varying between US\$164 in rural areas, US\$617 in provincial towns, and US\$825 in the Port-au-Prince area. The capital stock for directly productive activities is estimated at about US\$720 per head of the economically active population, 2/ varying between US\$373 in rural areas, US\$1,745 in provincial towns, and US\$2,093 in Port-au-Prince.

Cost of Alternative Spatial Strategies

5.14 These 1976 per caput figures of capital stock were adjusted in two ways for estimating the investments required in different regions for each of the four alternative strategies. Firstly, it was assumed that per caput total investment for infrastructure and for productive purposes should rise by 4% per annum in real terms to make up for the general inadequacy of infrastructure and to allow both for the gradual absorption of open and disguised unemployment and some rise in the average capital-intensity of job creation. Secondly, in recognition of the presently vastly inferior infrastructure and productive capital stock in the provinces compared to Port-au-Prince, it was postulated that, for 1976/86, the observed differences between Port-au-Prince and the provincial towns and between the latter and rural areas should be halved. A further reduction in these differences was targetted for the average over the years 1986/2001. 3/ This is done to allow the rural areas and the provincial towns to catch up to some extent and in recognition of the fact that historical per caput stock amounts are inadequate for the building of new facilities. Table V.2 below summarizes the results of these calculations.

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- 1/ Total derived from national accounts data since 1950, national capital-output ratio of 3.0 in real terms and an adjustment for inflation to 1976. Estimate of the components based on an analysis of the structure of investment. Capital stock allocated by region in line with the geographic distribution of national income, as shown in Annex Table 1.7.
- 2/ Given the difficulties of applying the concepts of employment and unemployment in the Haitian context (see Chapter II, Section 1), these figures are not costs per job but capital stock per member of the labor force. The high percentage of informal activities and of open and disguised unemployment in Haiti suggests that historical costs per job have been significantly higher.
- 3/ See Annex Table 5.6 and explanatory notes for further details.

Table V-2: TOTAL ANNUAL CAPITAL REQUIREMENTS BY REGION AND BY STRATEGY,
1976 - 1986 - 2001
(1976 Prices)

	1976 - 1986				1986 - 2001			
	I	II	III	IV	I	II	III	IV
Total - US\$ Mil.	207.5	207.0	211.2	210.9	336.3	308.5	322.2	320.9
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Urban areas	78.1	74.7	75.7	75.7	87.7	57.1	70.0	69.9
Port-au-Prince	61.0	56.5	57.7	57.4	74.2	41.1	53.8	51.1
Other towns	17.1	18.2	18.0	18.3	13.5	16.0	16.2	18.8
Rural areas	21.9	25.3	24.3	24.3	12.3	42.9	30.0	30.1

Source: Annex Table 5.6.

5.15 Among the different strategies, differences between annual capital requirements and their geographical composition appear in the 1986/2001 period when, as assumed in the demographic projections, the impact of the different strategies will really be felt on migration and thus growth of population and labor force in the different regions. By the same token, differences between the four options are minor for the period up to 1986. The status-quo Strategy I remains relatively cheap during this period because it is based on actual per capita capital stock figures rather than on higher target figures for provincial towns and rural areas as is the case for all other strategies.

5.16 Strategy II, eliminating rural-urban migration, would be the least expensive alternative but is highly theoretical. Even if it were politically feasible, it would require the creation of some 22,000 jobs p.a. in rural areas during 1986/2001 which, in view of the overcrowded agricultural sector, would have to take place exclusively in non-agricultural activities. This is a highly unlikely prospect.

5.17 Alternative Strategies III and IV require less employment creation in rural areas and are thus more realistic. Strategy IV (realistic rural development cum balanced urban development) is slightly less expensive than Strategy III. It implies non-agricultural employment creation in rural areas at a rate of 12,700 p.a. during 1986/2001, which could be attainable through specific programs such as labor-intensive public works and environmental conservation measures. It also implies job creation in provincial towns at an average rate of about 6,900 per annum over the same period which could be feasible if the provincial towns were given the intermediate role suggested for them below. This approach is not only relatively cheap but achieves a more balanced spatial structure in the long run and corresponds to the Government's strategy as outlined in the second Five-Year Development Plan: it qualifies as the most reasonable framework for a spatially oriented development strategy and thus also for an urban sector strategy.

Orientation of the Investment Program

5.18 These cost estimates which are based on the previously discussed migration hypotheses are far from providing the general framework of an overall investment program. The estimates use target investment figures for provincial towns and rural areas rather than present capital stock figures per caput. Their use would reduce the gaps in capital equipment between Port-au-Prince, the provincial towns and rural areas and result in geographical shifts in capital investments. However, this shift would probably not be sufficient to change the spatial structure by itself. As Annex Table 5.6 shows, much of the investment will be absorbed by replacement needs which will most likely be carried out in the present locations of these assets. To achieve a spatial reorientation, an investment program has to overcome this heavy "historical burden" of the established system of spatial dynamics as demonstrated, inter alia, by patterns of migration and industrial location. As experience elsewhere shows, it is not enough to make changes in the spatial allocation of public investment in favor of regions so far neglected, especially since public investment is only part of the total. It has to be accompanied by a certain discrimination against traditional centers of gravity thus setting clear bench marks for the reorientation of investors and population.

5.19 If such a policy of discrimination against the future relative growth of Port-au-Prince were to be pursued, one possible step would be to reduce the investment deemed necessary to accommodate the additional population and employ the additional labor force. While maintaining and improving the existing capital stock, the reduction of new investment in infrastructure and directly productive activities might conceivably help to discourage new migrants. About 57% of the expected population increase in the Port-au-Prince area during the period 1976/1986 is directly and indirectly due to migration and an equivalent cut of about 60% in new investment, as calculated in Annex Table 5.6 for Alternative IV, illustrates the theoretical impact of such a policy on the investment program. Since overall investment of about US\$211 million p.a. at 1976 prices is feasible during the period up to 1986, if foreign assistance continues to develop at the present pace, funds released by reducing investment in the metropolitan area could be allocated to provincial towns and rural areas. Volume and geographical structure of such a hypothetical program compared to the actual structure of planned investment in Haiti are shown in the following Table V.3.

Table V-3: VOLUME AND GEOGRAPHICAL STRUCTURE OF DISCRIMINATORY, SPATIAL INVESTMENT PROGRAM COMPARED TO PLANNED PATTERN OF INVESTMENT, HAITI 1976-1986

	<u>Investment Program Discriminating Against Port-au-Prince, 1976/1986</u>	<u>Actual Investment Program, 1976/1981 /1</u>	
	<u>Total Amount p.a. in Millions of 1976 G</u>	<u>Percentage Structure</u>	<u>Percentage Structure</u>
Urban areas	<u>658.3</u>	<u>62.4</u>	<u>63.3</u>
Port-au-Prince	<u>361.3</u>	<u>34.2</u>	<u>49.9</u>
Other Towns	<u>297.0</u>	<u>28.2</u>	<u>13.4</u>
Rural areas	<u>396.3</u>	<u>37.6</u>	<u>36.7</u>
TOTAL	<u>1054.6</u>	<u>100.0</u>	<u>100.0</u>

/1 Based on 1976 volume of investment; regional breakdown of public investment according to estimates in Table 1.17; directly productive private investment according to present geographical distribution of national income from Table 1.7.

Source: Tables 1.7, 1.17 and 5.6; totals based on Alternative IV.

5.20 Rural areas get almost the same relative importance in the "proposed" and the actual investment programs but allocations differ considerably within the urban sector. In order to achieve the changes in the spatial structure envisaged in the second Five-Year Plan and reflected by Alternative IV, the Government might have to go some way towards a "discriminatory" policy and emphasize rural development and urban development outside the Port-au-Prince area even more than it does now. Any urban sector development strategy should be designed with this background. Investments in the Port-au-Prince area should do little more than is necessary to accommodate the natural increase in population and labor force. In provincial towns and rural areas, a maximum program should be designed to encourage the desired improvement of the interurban structure and a slowdown in rural-urban migration.

Financial Considerations

5.21 Average annual investment requirements estimated for the period 1976/1986 amount to about US\$211 million in 1976 prices. This investment volume is feasible if GDP grows at 4-5% p.a. in real terms and if resource inflows from foreign aid, private direct investment and transfer payments continue at a level of 40%-45% of total investment.

5.22 An estimated one-third of total investment will be made directly by the public sector in infrastructure. The public sector will also be involved in the 20%-25% of total investment to be spent for housing and, through the industrial estate operations, equity participations and lending activities of the IDAI group and the leasing activities of the DTPTC, in directly productive investment. Assuming public sector involvement in the latter two areas is equivalent to about 15% of the total, some 50% of total investment or about US\$105 million in 1976 prices will be accounted for by public investment activities. Given the low level of domestic savings in general and of public sector savings in particular, a high percentage of this investment will have to be financed by external loans and grants. If foreign aid inflows continue at their present pace, this should be feasible. Difficulties might, however, arise with the financing of operating and maintenance costs of the investments realized.

5.23 Total resource mobilization, with an overall fiscal burden on the order of 12%-13% of GDP, 1/ is about in line with that in other countries as poor as Haiti. However, over the years, Haiti has developed a very intricate fiscal system characterized by high proportions of earmarked revenues and a large number of special accounts, which are not subject to normal budgetary procedures. Revenues actually available for the operating budget are thus very limited; in FY 1975/76, they reached only about 43% of Government current revenues. Moreover, the tax system relies strongly on volume-specific taxes with relatively low elasticity, 2/ and revenues to finance recurrent budgetary expenditures are sluggish. It is estimated that, with present tax legislation and present earmarking procedures, budgetary revenues will grow at annual rates of only 8%-9% in nominal terms over the next five years. Thus, there is little scope for massive additional recurrent expenditures. The strained fiscal situation has to be kept in mind when discussing investment programs with public sector involvement.

Shaping the Urban Sector

5.24 The Government has opted for a policy of encouraging the development of provincial centers more than in the past, and the preceding discussion has established the financial feasibility of this option. Given our present inability to assess the costs and benefits of possible alternatives with an adequate degree of completeness and precision, the government's option must be the basis for any proposed Urban Strategy. The real difficulty lies in trying to flesh out this overall policy option for practical guidance of urban development.

5.25 In Haiti, the prime requirement is to strengthen institutions and decision-making procedures and to make them more responsive to urban development needs and potentials. In this sense, regardless of its content, any urban strategy is better than the still vague present policy since it would

1/ Including estimated revenues of Regie du Tabac.

2/ The elasticity of revenues with regard to GDP is estimated at about 0.8.

provide a framework against which to define institutional ambitions, responsibilities and procedures and to assess institutional performance. Beyond that, the nature and shape of these strategic guidelines retain their full importance.

5.26 An urban strategy in Haiti has to recognize that maximum development of agriculture is a valid top priority for the country. Urban development should support this priority. It can do so in two main ways. Firstly, the urban sector has to supply material and service inputs to agriculture and to process agricultural output. Secondly, it must support increases in agricultural incomes by providing non-agricultural employment opportunities in the most efficient manner possible. These two support roles provide the general basis for defining the economic roles of Port-au-Prince and of the provincial towns, respectively.

5.27 There is little doubt that the first of these two support functions should be carried out through the provincial towns. There would be little or no advantage in locating in Port-au-Prince production of the type of input into agriculture that can be economically produced in the country, such as simple agricultural machinery or non-motorized transport vehicles. Even though the main provincial towns are a maximum of five to six hours away from Port-au-Prince by road, economies of scale are not likely to be large enough to provide a strong case for centralized production in Port-au-Prince. Similar considerations apply to agricultural processing activities. Provincial towns, therefore, should be adequately equipped to become agricultural service, marketing and processing centers. This would already require substantial upgrading of their infrastructure facilities.

5.28 The case is much less clear-cut for efficient creation of non-agricultural employment beyond that implied in the preceding function. Existing opportunities for creating employment in manufacturing activities based on natural resources other than agriculture are limited. Craft development should be encouraged both in Port-au-Prince and in the provincial towns, as should the development of the construction industry. That leaves modern manufacturing, essentially in assembly-type industries. There is no doubt Port-au-Prince presently provides considerable locational advantages for this type of activity. To make provincial locations competitive with the metropolitan region would require such heavy investment in physical and institutional infrastructure that equally considerable payoffs would be needed to justify them.

5.29 Such payoffs cannot be easily identified. The major area where they might be expected is in reducing the costs of agglomeration in the metropolitan area. These can be expected to increase significantly as Port-au-Prince grows, for example, because the city may soon start encroaching on some of the best agricultural land in the country and because at some time in the future, major new investments in water supply may be needed. Slowing the growth of the capital would postpone the time when these costs have to be faced. Unfortunately, the dominance of the metropolitan area is such and the number of jobs involved so small that very little relief for Port-au-Prince can be expected even from extraordinarily successful efforts to move

footloose industries to locations in the provinces. Even if all of the expected increase in assembly-type industry employment of some 3,000 p.a. took place in the provincial towns, which would provide jobs to about three out of five new entrants to their labor force (on the basis of historical trends), this would still amount to less than 15% of the incremental labor force expected in Port-au-Prince. In addition, present employment in all modern manufacturing in the provinces is so low that it would take a very long time to reach a level of employment creation of 3,000 p.a. In 1975/76, seven major provincial centers provided no more than a total of 1,700-1,800 jobs in modern manufacturing industries.^{1/} It would take many years, even disregarding the time required to provide the needed infrastructure, before manufacturing employment creation in provincial centers could make any significant dent in the growth of Port-au-Prince.

5.30. In addition to its role in overall development strategy as exemplified by the agricultural support and employment creation functions, urban strategy has to come to grips with the need for urban service delivery. As a bare essential, minimum service delivery is mandatory on grounds of public health and safety and protection from the elements. As we have seen, the low-income population in Port-au-Prince is at least as badly off and in some cases worse off in these respects than the population in the three provincial towns that were analyzed. This applies to water, garbage and human waste disposal, shelter, fire and flood protection, nutrition and public transport. It is, therefore, not possible to neglect this category of problems in Port-au-Prince in favor of the provincial towns.

5.31 The following features of an urban strategy emerge from this discussion:

- (a) Provincial towns, selected for the agricultural potential of their hinterland, should be equipped speedily and adequately to fulfill their functions as agricultural service and processing centers; activities of this type in Port-au-Prince should be limited to its own agricultural hinterland;
- (b) Port-au-Prince and its surroundings should, for the time being, continue to be promoted as the main location for assembly type industrialization. Until such time as substantial benefits can be anticipated from trying to redirect such industries to provincial locations, activities in provincial towns should be limited to preparing the ground for such a move by building up the institutional capacity of the towns;

^{1/} See Table 2.1 in Annex.

- (c) While employment creation in urban areas should receive top priority, it should go hand in hand with minimum urban service delivery. Such service delivery should be pursued simultaneously in the provincial towns and in Port-au-Prince. Preference should be given to the provincial towns only insofar as the less severe and less widespread nature of their problems makes it possible to adopt a shorter time horizon for complete or near-complete coverage of their population than is possible for Port-au-Prince; and
- (d) Preference should also be given to the provincial towns in those areas where Port-au-Prince is manifestly much better equipped, such as in educational opportunities and in health delivery. This would enhance their role in servicing the surrounding rural areas, especially if accompanied by greater political and financial autonomy of the local administration and by decentralized institutional development more generally.

5.32 With these considerations in mind, the project and program ideas that are suggested below for possible involvement by the World Bank in Haiti's urban sector have been defined and ranked by order of priority.

C. SOME FACTORS CONDITIONING WORLD BANK INVOLVEMENT

5.33 From the discussion in the preceding chapters, it is evident that Haiti needs urban sector assistance in general institutional strengthening, employment creation, housing and land finance, environmental management, water supply and certain transport/land use aspects concerning marketing and related activities. Although health delivery was not specifically analyzed in this report, it is also generally clear that urban health and nutrition assistance is required. In principle, the prospects for integrated urban development efforts appear good. Policy statements at the national level reflect a desire to develop human resources, to redistribute social wealth and to stimulate upward social mobility. There is also a stated bias in favor of developing provincial towns, although public program proposals and actions have continued to focus on Port-au-Prince. Therefore, theoretical opportunities exist for assistance to all places analyzed in this report.

5.34 In practice, however, a number of issues are likely to affect project acceptability as far as the Government is concerned. One important issue is the opinion of public officials that slum-upgrading efforts or sites and services provision and the temporary "slums" which are part of such schemes are not the answer to housing problems, and that subsidized concrete homes are the only option available. Even recently, this seemed to

be a fairly widespread view and the two UNCDF projects provide ample evidence of efforts to transform simple slum-upgrading and sites and services projects into relatively high-cost housing tract developments.

5.35 In a sense, some of the past public shelter activities, though very small, have used a simple sites and services or sites without services approach. Until now, the prevailing public view has confined this approach exclusively to emergency relocations. In tandem with what is considered adequate shelter it is also an article of faith that low-income families cannot afford to pay for housing and that cost-recovery, direct or cross-subsidized, is impossible. This is certainly true in the case of high-quality shelter. For the vast majority of low- and middle-income urban families, the ability to pay ranges from US\$2 to US\$12 a month. ^{1/} Current market prices for land, construction materials and labor thus require the adoption of low design standards, even with very attractive long-term interest rates for borrowing. Any large-scale public intervention in low-cost shelter can only go ahead with the determined support for this approach at the highest official levels. A change of view in the desired direction was initiated by the position taken by the President of the Republic in favor of sites and services schemes.

5.36 A pointer that this change of opinion would be possible was the work done by the Service d'Urbanisme on low- and middle-income shelter in 1977. ^{2/} Though at an early stage and not yet an official proposal, it represented the only coherent and logical low-income strategy yet produced by any Haitian public institution. Arguing for a strategy of "controlling" the growth of urban slums rather than eliminating them, the proposal, which is based on work done by the PPHC, outlines four levels of intervention with increasing design standards. The costs and revenue estimates made in the proposal are preliminary and crude and are intended only to demonstrate the relative effectiveness of each form of intervention and thereby promote acceptance of an approach that could readily be designed, implemented and managed without recourse to large outside technical, financial, or managerial assistance.

5.37 Another important issue could be interagency competition for housing projects. In the past, DATPE, the DPPD, the ONL and the Service d'Urbanisme have all made their own proposals and the BDL is bound to do so when it starts operating. In terms of Government acceptance of proposals for outside assistance, it is important to note that the Ministry of Planning is the legal coordination agency for such assistance. Under the predecessor of the Ministry, CONADEP, this key position between external assistance and sectoral agencies has led to DATPE taking the direct lead in a number of projects which should have been under sectoral agencies like the ONL, the Service d'Urbanisme, etc.

^{1/} See Chapters I and III.

^{2/} Propositions Pour l'Amelioration du Logement Social a Port-au-Prince et les Autres Villes d'Haiti, Service d'Urbanisme, DTPTC, September 1, 1977.

Only experience can show whether the reformulation of mandates of many of the services active in urban questions will alleviate these problems, what degree of influence the Ministry of Planning will have on housing projects and how it interprets its coordinating role.

5.38 Other issues are likely to affect project preparation and implementation, such as the technical, managerial and financial inadequacies and constraints of sectoral agencies, weak or non-existent interagency coordination, quasi-total absence of enforcement powers, etc. (see Chapter IV). Past efforts at institutional upgrading with outside assistance have often been unsuccessful. In many projects with training components, the counterpart personnel did not have the agreed qualifications, or have demonstrated work habits, such as absenteeism, which the Government has not controlled, etc. As a result, foreigners often had to substitute for locals in the preparation and implementation of projects. These problems have often been compounded by the way many foreign assistance agencies choose their consultants which has made it difficult to control the quality of foreign staff and the cohesiveness of assistance teams. All too often, their work has been mediocre, linguistic problems have arisen and commitments to train counterparts have not been honored. It is, therefore, not surprising that many assisted agencies were subsequently unable to carry on even a segment of the technical work that had previously been done. Such an outcome is exemplified by UNCHBP assistance to CONADEP and the Service d'Urbanisme, UNDP assistance to DATPE, past PAHO and IDB assistance to CAMEP and IDB assistance to the Service de Genie Municipal. IICA has obtained better results in its assistance to the Department of Agriculture because it selected counterparts from a list of candidates put forward by the Department, it designed programs around counterpart capabilities, and it signed an agreement with the Department whereby absenteeism or other forms of irresponsibility would result in counterpart dismissal. The Bank must take careful note of the causes of failure or success. Technical assistance components of project proposals cannot, in the case of Haiti, be treated lightly as a simple condition for project implementation. In the short run, the implementation of appropriate technical assistance will itself constitute a major effort.

5.39 It follows from this discussion that:

- (a) projects must be carefully designed and, initially, must be kept very simple in their components and adapted to existing levels of institutional competence. When and if the performance of agencies improves, projects can gradually be made more complex and larger;
- (b) the number of agencies involved must be kept to a minimum in order to facilitate and test coordination capabilities. This implies a small number of services or activities in initial years, in line with point (a) above;

- (c) the specific agencies to be involved must be carefully selected, and they must be willing to sign precise agreements concerning personnel evaluation, selection and management; and
- (d) in line with and in support of points (a) and (c) above, Haitian personnel should take management responsibility as early as possible.

D. URBAN PROJECT OPPORTUNITIES

5.40 A number of project or project component ideas arise from this report. They are preliminary, because important urban projects of other assistance agencies are being implemented right now, 1/ some basic surveys are underway 2/ and the experience with the UNCDF shelter projects will have an important bearing on the type and nature of possible World Bank intervention.

Central Market Improvement in Port-au-Prince

5.41 The central market of Croix des Bossales is a fundamental issue of top priority from the point of view of income production, including costs of transport and costs of remedial health care, and for the spatial pattern of demand for land and housing (see Chapter III). It has to be dealt with in terms of all the roles it plays in the city and in relation to the effects that other programs might have on it. For example, urban-wide erosion control and drainage improvement will reduce the degree of flooding in the area. More specifically, slum-upgrading projects in the areas of Bel Air, Sans Fil and Fort National/Poste Marchand may reduce the amount of silt and human waste that runs directly into the market. However, these programs have relatively long-term time schedules, and it is necessary to seek improvements under current environmental conditions.

5.42 Conditions in the market would be improved somewhat if solid waste collection by the municipality is upgraded, as planned in the above-mentioned IDB project. However, an effort specifically aimed at the central market may be needed. Major improvement efforts require a prior decision as to whether the market will be permitted to grow at its present location or be moved to other locations. Such a decision must be based on careful analysis of all its implications and must take account of the conflicting effects of current public actions in and around the market.

1/ In particular the IDB drainage project in the capital.

2/ Such as the INFP/IHS survey of manpower requirements in industry, the USAID-sponsored nutrition survey and the UNIDO industrial survey.

5.43 The more important of these actions are the expansion of port facilities and private port-related activities, construction of a new coastal shipping wharf at La Saline, reconstruction of La Saline Boulevard and the reorganization of marketing space and construction of a truck terminal. While some of these actions stimulate the market's activities, others constrain its expansion. To decide whether the market should or should not be decentralized and if so, when and where, a study is needed to identify and assess the effects of alternative market locations. Such a study requires a great deal of technical assistance and integrated efforts of a long list of agencies. The major ones are as follows:

- (a) analysis of effects on the intra-urban produce marketing system:
 - (i) Service National de Commercialisation Agricole (SENACA) of the Department of Agriculture;
 - (ii) Instituto Interamericano de Ciencias Agrícolas (IICA) for technical support to SENACA;
- (b) analysis of joint effects on transport and on the spatial pattern of housing demand:
 - (i) DTPTC and DATPE for analysis of land use and demand effects and related urban service requirements;
 - (ii) Administration Generale des Contributions for analysis of land price effects and selection of alternative sites;
 - (iii) Service de Circulation for analysis of traffic management effects;
 - (iv) SAT for analysis of traffic effects and road/sidewalk requirements; and
 - (v) the municipality for analysis of requirements for market management and of possibilities for revenue generation at the market.

5.44 Since most of the identified agencies cannot carry out the necessary technical analyses alone, assistance is required. Since one objective of the study would be to identify a concrete project for market reconstruction and improvement, both the DTPTC and the municipality should have leading roles in this effort. The DTPTC should later become the project executing agency and the municipality should manage the completed facilities.

5.45 In line with the preponderant if not overwhelming role of the central market in the informal sector, both of Port-au-Prince and of the

provinces, informal sector assistance should be an integral part of preparation and execution of a market improvement project. Lack of adequate institutional support to employment generation activities has been identified over the whole range of industry, crafts and informal sector activities, but is most noticeably absent for the bulk of small-scale activities that take place in the latter sector. A precondition for any sizeable support program for the informal sector is a much better understanding of its functioning and its support needs. A policy-oriented investigation of this type is, therefore, the initial requirement. Such a study would find its most logical place in the preparation of a market improvement project for Port-au-Prince but could also be attached to any other urban project that may be retained for priority attention.

5.46 There is no obvious institutional home for this effort. The IDAI group is already stretched thin and has not been successful with small-scale loans or technical and marketing assistance. The National Crafts Office is not yet really operational and its mandate only covers part of the informal sector. The BHPI does not have the capacity to take on a study or to implement such a program. It is important that the agency that will eventually implement any support activities should be involved in the initial investigation. Possibly, the Department of Commerce and Industry could be asked to take the lead in this field, drawing on the staff resources that should be relieved of their previous duties in the four ministries previously responsible for crafts promotion by the creation of the National Crafts Office. Support might also be sought from SENECA/IICA based on their work of a similar nature in rural areas and from ILO/IHS. It is also strongly recommended that non-governmental agencies should be involved from the beginning to make use of their grassroots knowledge of informal activities and to prepare them for a possible role in assistance delivery later. Finally, an attempt should be made to harness the expertise and cooperation of at least some of the moneylenders active in urban areas.

Urban Services

5.47 Another important component that might be attached to a market improvement project concerns urban sanitation improvement. This component should have three elements: 1/

- (a) creation of a comprehensive human waste collection and disposal service in Port-au-Prince; 2/

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- 1/ These proposals are based on the assumption that the forthcoming IDB project will achieve a comprehensive improvement in solid waste collection in the capital, including institutional reforms and strengthening.
 - 2/ Rough calculations suggest that a human waste collection service in Port-au-Prince could be set up for some US\$750,000 to US\$800,000 and could be managed on a financially self-sustaining basis.

- (b) development; testing and introduction of human waste disposal methods appropriate for difficult conditions such as those in the marshy areas in the northern part of the capital and in all three provincial towns analyzed; and
- (c) improvement of garbage collection and disposal in provincial towns. 1/

5.48 Neither the upgrading of the human waste disposal systems in all the urban centers, nor improvement of solid waste collection and disposal in the provincial towns are covered by ongoing or planned projects. While only minor management and equipment efforts seem necessary in garbage removal in the provincial cities, a comprehensive effort at better human waste disposal needs to be undertaken in all the urban areas analyzed. Without such an improvement in Port-au-Prince, for example, the public health benefits of the erosion control/drainage/garbage removal elements of the IDB project will not be fully realized. A massive improvement in human waste disposal is also an obvious condition for improvement in the central market and for the effectiveness of the services components of future sites and services and slum upgrading schemes both in the capital and in the provincial towns.

5.49 For both garbage collection in the provinces and human waste disposal problems, the Division d'Hygiene Publique of the Department of Public Health is the responsible agency. PAHO should be associated with this project component. If, as is desirable, the feasibility of converting human waste and garbage into fertilizer is being investigated, 2/ IICA should participate in assessing marketing potential for the fertilizer.

5.50 Some efforts in drainage improvement could also be attached to the first urban project of the Bank in Haiti. Gonaives, Cayes, parts of Cap Haitien and the Brooklyn-Boston-Cite Simone-Drouillard area of Port-au-Prince all suffer from similar poor drainage conditions. 3/ In order to facilitate shelter improvement projects in these areas, technical assistance to the Department of Public Works is required to determine methods of dealing with the problems and to assist in the preparation and design of improvement projects. Assistance should also include advice concerning erosion and drainage system degeneration in Cap Haitien. Some of these problems, in particular those in the Brooklyn-Boston area of Port-au-Prince, will be studied under the forthcoming IDB project, but the subsequent investments are not included in that effort. No cost estimate is available for the needed investments in Port-au-Prince and in the provincial towns.

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- 1/ Other provincial towns may have the same problem and should be included in the component.
 - 2/ In the framework of DRIPP (Developpement Regional Integre de Petit-Goave a Petit Trou de Nippe), a Canadian-financed regional development effort, experiments are underway with intermediate technology in the collection and treatment of garbage.
 - 3/ Other towns that may have similar problems would be included.

5.51 Consideration should also be given to attaching a sites and services project component to the Bank's first urban project in Haiti. Its purposes would be to:

- (a) test the willingness of Government to engage in a sites and services scheme consistent with Bank policy;
- (b) test and evaluate the competence, commitment and coordination capabilities of the primary executing agencies; and
- (c) demonstrate the feasibility of cost recovery and the possibilities of improving institutional capabilities.

5.52 Latest developments make it possible that such a sites and services component in a Bank-financed project could benefit for at least some of the open questions from the experience of the UNCDF financed projects in St. Martin and Drouillard. While the raising of the design standards in these projects makes it unlikely that cost-recovery will be possible at desirable levels, the large technical assistance in the projects will at least benefit and upgrade the ONL on condition that the implementation of the UNCDF projects is fully integrated into the ONL which now seems to be planned. In any case, the site for this component in a Bank project should be chosen to be within the present operational range of the main service delivery agencies, such as water and garbage removal.

5.53 Whether the project site is in the provinces or in Port-au-Prince, three primary executing agencies would be involved:

- (a) the Administration Generale des Contributions for site acquisition and later collection of payments on behalf of the ONL;
- (b) the ONL for definition and administration of allocation and accession policy, development of pricing policy and for eventual overall management responsibility; 1/ and
- (c) the DTPTC for site evaluation, technical design studies, cost estimates, contract and construction supervision, enforcement of town planning laws, coordination with service delivery agencies and short-run overall management responsibility.

1/ Now and later in this report, the ONL is named as the institution to administer public, low-cost shelter programs. This should not prejudice the decision by the government on the respective mandates of ONL and BDL, a decision which is urgent (see Chapter IV).

5.54 High priority also attaches to general technical assistance to the Administration Generale des Contributions in the very important area of property valuation and taxation. As was discussed in Chapter IV, reform in these methods is urgently required and may be a precondition for cost recovery and for strengthening of the municipalities. Given the likely lead times required to implement reform in property valuation and taxation, it is important to initiate work in this area at the earliest possible moment. Technical assistance may also be needed for other technical work that is required to prepare the formulation and later implementation of a land use policy, such as the reestablishment of usable cadastres. Later on, the municipalities should also become the recipients of a general technical assistance effort, particularly in management and administration. Finally, consideration might be given to the formulation of a health and nutrition component. Fresh data on urban nutrition problems should become available from the USAID sponsored nutrition survey and might provide the basis for intervention. The need and scope for other health interventions such as community health centers would need to be investigated separately in project preparation work.

Large-Scale Sites and Services Program

5.55 If the sites and services element of a first Bank project and the UNCDFP pilot projects appear to function well, including coordination with other agencies in waste collection, latrine cleaning and potable water services, and if parallel projects are successful in improving service delivery by other agencies, it becomes reasonable to think in terms of a larger-scale program approach. Sites and services provision should probably receive some priority over slum upgrading or at least be carried out in parallel in order to minimize the growth of new slum areas and the cost of subsequent upgrading. The first stage of the program could cover the major part of the anticipated low-income shelter needs in the provincial towns selected by the government for priority attention but could not hope to deal with all the requirements of Port-au-Prince.

5.56 It is premature to suggest what size and what service standards or service composition this larger program should have. Purely as an illustration of what might be possible, some work done in 1976 in Port-au-Prince suggested that in an area of 60 ha, for example, some 10,000 plots could be serviced, about half of which with no constructions, the other half with varying degrees of house completion. A project of this size would provide shelter support to some 50,000 people or the equivalent of about 18 months of population growth in the capital at present rates. ^{1/} With a design density of 830 persons per ha, cost recovery could be possible at monthly payments of US\$4.60 to US\$10.50. This implies an income range of beneficiaries from US\$25 to US\$50 per month. Even the higher of these figures is well below the lower of the absolute poverty levels defined for

^{1/} If such a program were spread over the provincial towns, it would accommodate four years of population increase at present rates.

Port-au-Prince in Chapter I. However, at the lower end, the calculations do not include credits for house completion and the resulting repayment burden.

5.57 The primary executing agencies would remain the same as in the sites and services project element described above. However, if the management capabilities of the ONL improve sufficiently, it should become the lead agency.

Industrial Sites and Workshop Areas

5.58 In those provincial towns where residential sites and service projects are located and whose hinterland is being developed with promising rural development projects, industrial and commercial sites and craft workshop areas could be developed. At present, only Port-au-Prince has part of such a program on its industrial estate. The need for such facilities would have to be investigated fully by the IDAI, the Industrial Promotion Office and the National Crafts Office. The need for parallel provision of investment and working capital finance should be included in the investigation. IDAI and its subsidiaries might be made responsible for the sale or lease of developed sites and the Industry and Craft Promotion Offices for the required technical assistance. If a development finance company is set up following the USAID-sponsored feasibility study, and if it becomes operational in good time, that institution might also be involved.

Slum Upgrading

5.59 A low-keyed approach must be suggested in slum upgrading, not only because of the previously discussed need to keep projects within the management capabilities of existing institutions but also because of the financial implications of more ambitious approaches for the Government budget and the chances of cost recovery. In Port-au-Prince alone, the replication of the standards now adopted for the St. Martin/UNCDF project, over the remaining 306,000 slum dwellers, would cost some US\$32 million plus another US\$30 to US\$50 million for land expropriation. At the lowest level of intervention, important improvements in welfare could be obtained just by better water supply.

5.60 A simple approach might be to provide water, construct pathways and associated community drainage works and provide latrine construction assistance. Parallel works in drainage system improvement, road pavings, garbage removal and latrine cleaning should be covered in the investment programs of the responsible agencies. Drainage system improvement and garbage removal are part of the IDB project in Port-au-Prince but the drainage improvement program of this project does not include the new northern slums such as Brooklyn and Boston except for technical design and experimentation of drainage methods. Their upgrading would, therefore, require a drainage investment component. This would also be the case for some of the slum areas in provincial towns. Improvements in human waste disposal and collection were proposed in the Bank's first urban project throughout Port-au-Prince and

the provincial towns. Road paving should be decided on a case-by-case basis. This approach could be complemented by credit for house improvements and land acquisition under the same conditions as for sites and services activities.

5.61 Slum problems in provincial towns are sufficiently manageable so as not to require a staged approach; they could be dealt with in their entirety, if the Bank decides to support an upgrading program. This is not so in Port-au-Prince. A slum upgrading strategy for Port-au-Prince has to take into account a number of factors and recent developments. The area of La Saline has been depopulated by port-related activities, and half of the population has been transferred to the Brooklyn area. The Brooklyn-Boston-Cite-Simone area has now grown to almost 60,000 inhabitants living under particularly bad conditions. Portail St. Joseph is an integral part of the central market zone, and its general improvement could be attached to a market upgrading project. Finally, the St. Martin project is about to start, including the reconstruction of its drainage facilities, and it would be logical to upgrade the areas upstream, where erosion and solid waste originate and flow to St. Martin. Upgrading might in priority proceed as shown in Table V-4 below.

Table V-4: PRIORITY RANKING OF SLUM-UPGRADING IN PORT-AU-PRINCE

<u>Community</u>	<u>Estimated Inhabitants</u>	<u>Estimated Investment (Per Caput (US\$))</u>	<u>Estimated Total Investment (US\$)</u>
<u>St. Martin (UNCDF)</u>	<u>20,000</u>	<u>160</u>	<u>3,210,000</u>
Sans Fil	42,000	20	840,000
Fort National/ Poste Marchand	38,000	20	760,000
Bel Air	26,000	16	416,000
Brooklyn/Boston	60,000	20	1,200,000
Martissant	14,000	20	280,000
Bolosse	<u>65,000</u>	<u>20</u>	<u>1,300,000</u>
TOTAL (excl. St. Martin)	245,000	<20	\$4,800,000

Source: Mission estimate based on PPHC data. Includes only the approach outlined at the beginning of para 5.60. St. Martin costs include technical assistance expenditures for the Drouillard site-and-services project.

- 5.62 The executing agencies for these projects should be:
- (a) the relevant services of the DTPTC for project preparation, technical and engineering studies, supervision of construction, enforcement of town planning laws, road and drainage works and subsequent maintenance; and
 - (b) the Administration Generale des Contributions for establishment of cost-recovery methods, tariff rates, collection and disbursement to agencies delivering urban services.

The agencies must coordinate with CAMEP for water supply, the Division d'Hygiene Publique for latrine cleaning and construction assistance and the relevant agency for garbage collection. The ONL may enter with credit. For this kind of limited project, there will be little need for outside technical assistance if assistance is already rendered for sites and services projects. 1/ Some short-term engineering assistance might be needed for evaluation of drainage methods on steep urbanized hillsides.

E. SUMMARY AND CONCLUSIONS

5.63 Among the various alternatives for a spatial strategy in Haiti, four were chosen for analysis. One is the continuation of the present spatial dynamics and another was chosen for comparative purposes only and, highly theoretically, assumes that rural-urban migration could be totally stopped by 1996. The two others attempt a reduction of rural-urban migration and, in one of them, a stronger orientation of such migration to provincial towns. It is this latter alternative, called Alternative IV, that corresponds most closely to the Government's stated objectives.

5.64 It is noteworthy that, even under the unrealistic alternative of totally arresting rural-urban migration as from 1996, the Port-au-Prince population would still double by the mid-90's. Equally important, however, with strong rural development efforts, if successful in reducing rural-urban migration, the population of the capital at the beginning of the next century would be some 500,000 to 600,000 below the population of 2.2 million that would result from the continuation of present trends. This shows the possible payoff from a conscious spatial development effort.

5.65 Assuming that labor force participation rates will gradually decline, some 22,000 jobs p.a. will have to be found between 1976 and 1986 and some 37,000 p.a. on average after that. This takes no account of present open and disguised unemployment. All of this labor force must be accommodated in non-agricultural activities. Labor absorption in agriculture is already

1/ However, it may be necessary for the Government to put one organization clearly in charge of the overall conduct of the slum-upgrading program.

stretched to the limit, and it is neither likely nor desirable that more labor should be employed in this sector, if per caput incomes in agriculture are to rise significantly. Modern activities, however, are too small in both absolute and relative terms to offer the prospect of creating more than just a fraction of the needed employment. Most of the additional labor force will have to earn a living in the rural and urban informal sector, which thus becomes the key sector for helping the poor.

5.66 Only the costs of the various spatial alternatives can be defined and that only in part. Based on an estimate of capital stock in the country and on the population projections inherent in the four alternatives for spatial development, investment costs were estimated for the various options and allocated to rural areas, provincial towns and Port-au-Prince. Overall, they show only small differences in total costs between now and 1986 but somewhat larger ones after that date. The projections postulate a significant reduction in the historical differences in investment per caput and per member of the labor force between the capital and the provincial towns and between the latter and the rural areas. Moderate growth of the capital stock per caput is also assumed in order to allow for improvements in infrastructure and somewhat higher capital intensities in productive employment creation.

5.67 A strategy of strong rural development and balanced urban growth with emphasis on the provincial towns (Alternative IV) is both realistic and in line with the government's priorities as expressed in the Five-Year Plan. It is also financially feasible. The implied annual average investment level of US\$164 million between now and 1986 can be achieved, if GDP grows at 4.5% in real terms and if foreign resource inflows continue to develop at their present pace.

5.68 Public investment is expected to account for about half of the total. Such a level was actually reached in FY1976 and can be sustained if foreign assistance continues to account for some 40%-45% of public investment. However, some redirection of the composition of public investments may be required to emphasize further the provision of infrastructure for productive activities and, possibly, to introduce some selectivity against the Port-au-Prince metropolitan area. While the investment volume is sustainable, problems may arise in financing current public expenditures. Until recently much of Haiti's current revenue was earmarked and remained outside the budget. Current budget resources grew only slowly, and there was little scope for massive increases in recurrent expenditures. It is too early to tell how this situation will develop after the fiscal reforms announced by the Government in 1978. Thus, the impact of public investments on subsequent current expenditure has to be carefully evaluated in any future projects.

5.69 The government's decision to emphasize rural development is right and determines an important part of urban strategy since the urban sector should support the development of the rural sector, both by providing needed agricultural inputs and processing facilities for agricultural output and by creating non-agricultural employment opportunities. Given the government's

decision to encourage the development of provincial towns more than in the past, provincial towns should be equipped to provide the bulk of the inputs and processing facilities needed. The construction and craft activities of provincial towns should also be encouraged to develop (as they should in Port-au-Prince). This would already involve substantial improvement in infrastructure in provincial towns. It is likely that directing more resources to them for this purpose would involve very little, if any, loss in output.

5.70 For the important but numerically small assembly-type industries, Port-au-Prince should, for the time being, continue to be promoted as the main location. It has a locational advantage for these industries that could only be rivalled by provincial towns with comparatively heavy additional investments, which it would take equally important pay-offs to justify. Such pay-offs cannot be expected for a long time to come despite the fact that the growth of the capital will cause rapidly escalating costs at some time in the future, e.g., when the city starts encroaching on the prime agricultural land that surrounds it or if and when heavy investments in water supply become necessary. Because of the relatively small number of jobs involved, even outstandingly successful efforts to move footloose assembly industries to the provinces will take many years to slow down the growth of the capital.

5.71 Urban strategy also has to come to grips with urban service delivery. The minimum necessary for public health and safety and for protection from the elements should be extended to all urban residents, regardless of where they live. Priority for provincial towns should, therefore, be limited to trying to resolve their problems faster than the much more extensive problems of Port-au-Prince. Only in services where Port-au-Prince is much better equipped than provincial towns, e.g., in education and health delivery, should the latter receive further preferential attention.

5.72 Within this overall framework, prospects for urban development projects and programs are reasonably good in theory and project opportunities exist in all the urban areas analyzed in this report. In practice, Bank-assisted projects will face a series of problems, such as:

- (a) the prevailing view of many government officials that anything short of houses made of concrete blocks and solid roofing is inadequate even for low-income shelter provision. However this attitude may now be changing.
- (b) the parallel view that cost recovery is unrealistic and heavy state subsidies are required, a view in contradiction with the previously identified budgetary constraints of the country. Here again, a softening of this position may be underway.
- (c) interagency competition for project control in low-income shelter, which may frustrate the efficient attainment of institution-building objectives of Bank projects; and

- (d) the general weakness of urban planning and service delivery institutions.

5.73 Project ideas for world bank involvement in Haiti's urban sector have been defined and ranked with the above considerations in mind. Top priority should be given to the possible decentralization and improvement of the central market in Port-au-Prince. The central market is of overriding importance for income generation of the poor, both in the capital and in the provinces, and for the location of any large scale low-income shelter projects in the city. In its present unsanitary condition, the market is a health hazard of the first order and requires urgent attention. Improvements in garbage collection and slum upgrading schemes could help to some extent but will take years to be effective. Improvements must be sought under present environmental conditions. Prior to any large investments, including those in low-income shelter, it has to be decided whether the market will remain at its present location or be decentralized. Its all-pervasive role in income generation, transport questions, land use and demand for shelter, etc., requires a careful and comprehensive analysis of the implications of maintaining or changing the market location. Among the large number of institutions that should participate in such an analysis, the DTPTC and the municipality should take the leading role because they would be in charge of the actual work and later administration of the facilities.

5.74 A market improvement project might also provide the best place for conducting the needed inquiry into the functioning and the support needs of the important and difficult informal sector. If it were decided to address another urban problem in priority over the market, such a study could and should also be attached to that project. It is, in effect, the informal sector that will have to absorb the bulk of the increases in the labor force in the urban areas in the future. Policy-oriented research is required to define the support system that is needed.

5.75 There is no obvious institutional home for such a study. Many of the institutions presently active in the delivery of finance or technical assistance to productive activities appear too small or too weak to undertake this effort. Further discussions will be required as to where this study should be carried out, but, as a first suggestion, it might be considered to place the responsibility with the Ministry of Commerce and Industry. The Ministry could draw on the staff resources that have become available when the activities of different ministries in crafts promotion, which are part of informal sector activities, were transferred to the National Crafts Council. A task force approach might be used, and it should be strongly urged that the task force incorporate representatives from non-governmental organizations active in Haiti and, if possible, of the moneylending networks in urban areas. It is these institutions and individuals that have the required grassroots knowledge and that might be used in any subsequent support delivery system.

5.76 Another important component of a Bank project in Haiti could be concerned with urban sanitation improvements both in Port-au-Prince and in the provincial towns. Human waste disposal improvement is not part of on-going or planned projects in any urban area in Haiti. Improvements are required in all the urban areas analyzed and need to be complemented in the provincial towns by improvements in garbage removal and drainage. Appropriate technical solutions to some of the drainage and human waste disposal problems are not available and require research, design and experimentation. The Ministries of Public Health and Public Works are the appropriate institutions for these efforts.

5.77 Before the Bank can engage in large-scale shelter projects in the country, the opinions on shelter standards and cost recovery that persist in certain official circles will have to be further modified. The UNCDF-financed pilot projects were originally expected to serve as testing ground in this respect. During their elaboration, certain doubts surfaced in this regard, especially concerning the increase in construction standards, badly defined cost recovery and the plan to implement the projects outside the existing institutional framework, in particular the ONL. Very recently, these doubts have been partly dispelled except for a reasonable degree of cost recovery which remains an open question.

5.78 The Bank could, therefore, build on these projects by attaching a sites and services component to its first urban project. Initially, such an effort has to be kept simple and must be carefully designed to adapt to existing levels of institutional competence. Also, a small number of carefully chosen institutions should be involved to minimize coordination problems and to strengthen the right institutions. Specific attention must be paid to personnel evaluation, selection and management, to avoid the pitfalls of past, often unsuccessful, institution-building efforts with foreign technical assistance.

5.79 Whether this component is located in the capital or in the provinces, it could be conducted with three main executing agencies, i.e., the DTPTC, the Administration Generale des Contributions and the ONL or, if the government so desires, the BDL. Coordination with other agencies, e.g., for water and garbage collection would be necessary, but many other services such as electricity, would be excluded to keep outside coordination requirements low. The DTPTC is well placed to assume the coordinating role and its former Service d'Urbanisme was the first agency to propose a low- and middle-income shelter approach similar to that of the World Bank.

5.80 Another possible component of a first urban project of the Bank might consist of general, as opposed to project-specific, technical assistance to the tax administration to rehabilitate land valuation methods, reform land and property taxation procedures, reestablish usable cadastres and generally carry out the technical work required for the formulation of a land use policy and its later implementation. Some of these activities are the basis for any substantial improvement in municipal performance and for systems

of cost recovery. Assistance to the municipalities is another area where general technical assistance schemes are required, if a consistent urban planning mechanism is to emerge gradually. Payoffs from both these areas could be substantial. Finally, a health and nutrition component could be defined.

5.81 A larger site and service program depends on the successful conduct of the small component described above and of the UNCDF project. Projects which are part of the program could be made gradually more complex if the performance of the executing agencies improves and if parallel projects to upgrade other service delivery institutions pay off. A first phase of such a program might deal with the anticipated population growth of provincial towns but could not hope to solve the problems of the capital. The executing agencies for a sites and service program should be the same as those chosen for the project component in the first urban project. If the performance of the ONL improves, this agency could gradually become the lead institution.

5.82 In those provincial towns where sites and service efforts are undertaken and whose hinterland is the subject of promising rural development efforts, the provision of serviced industrial and commercial sites and of craft workshop areas could be envisaged. This might go hand in hand with the provision of credit and technical assistance which would require the involvement of other agencies such as the IDAI group, the industrial and craft promotion offices and, if created in time, a development finance company.

5.83 Similar to the proposals on sites and services schemes, slum upgrading projects must start simply and, in any case, below the standards of the UNCDF-St. Martin Project. Slum problems in provincial towns are circumscribed enough not to require the strategic planning that is needed to deal with the problems of the capital. In Port-au-Prince, slum upgrading should start with the areas above the St. Martin neighborhood where much of the material that flows into that neighborhood is generated, so that the imminent reconstruction of the drainage facilities will benefit from the effort. Other priority areas are the new slums in the northern marshland area of the city, where some 60,000 people live under particularly appalling conditions.

5.84 Initially, the range of services to be provided in slum upgrading should be limited and might be confined to water supply, pathway and associated drainage works and latrine construction assistance. The range of project activities also depends on other urban projects. For example, drainage and solid waste collection will be upgraded through IDB assistance, though drainage problems in the marshes of Port-au-Prince and in provincial towns will not be fully covered. Drainage components would, therefore, be necessary in these locations in any Bank project.

5.85 Consequently, other projects in urban areas, in particular those financed by the IDB and by UNCDF, will have an impact on the exact shape and nature of the Bank's intervention and their evolution should be very carefully followed. Finally, for all of these preliminary project ideas, technical

assistance to the institutions involved needs to be defined and conducted with particular care. Many problems with foreign technical assistance have arisen in the past. Careful attention will have to be paid to the causes of success or failure in these efforts to try and avoid the more obvious pitfalls.

TECHNICAL NOTE ON THE COMPILATION OF INCOME DISTRIBUTION STATISTICS
(See Annex Tables 1.6 and 1.7)

1. The estimate of income distribution as shown in tables 1.6 and 1.7 has followed a three-step procedure:

- (i) estimate of incomes as specified by a survey (enquête a buts multiples) carried out by the Haitian Institute of Statistics (IHS) in 1976;
- (ii) supplementary estimates of non-specified incomes, mainly agricultural income in rural areas; and
- (iii) supplementary estimates with regard to the rest of the national income, i.e. income from entrepreneurship and property.

2. The IHS survey covered 10,000 households all over the country and was designed to permit conclusions on a "regional" level, i.e. Port-au-Prince metropolitan area, other towns, and rural areas. The income-related data refer to employed persons in different income brackets where incomes are given on a daily, weekly, half-monthly and monthly basis. The large majority of the population (70%), especially in rural areas, is shown without specification of corresponding incomes thus requiring supplementary estimates.

3. Incomes for persons specified by the IHS survey were calculated assuming that every person falling into a certain income bracket makes an income that is equal to the mean of that bracket. With regard to the highest income bracket we assume an average of G 30,000 a year which is in line with information obtained from the tax administration. Since our estimate refers to annual income and the survey data relate to incomes for shorter periods, an assumption had to be made with regard to the actual annual working time. Whereas for urban areas we assume 250 days of productive work (and thus income) per year, we adopted an average of 175 days per year for the mostly agriculturally oriented rural areas. These average figures were applied to incomes given on a daily and weekly basis (calculating with 5 working days per week). Half-monthly and monthly incomes were multiplied by 24 and 12 respectively. Although most of the poor people may actually work every day it is unlikely that they always obtain an income. Thus, the above average figures may be justified.

4. The shares of employed persons with unspecified income are: 16.5% in the Port-au-Prince area, 49.1% in other towns and 77.5% in rural areas. We assumed that these people either do not know their income (which is likely to apply to people in the lowest income brackets) or do not want to reveal it (which is likely to apply to people in the highest income bracket). Both in the Port-au-Prince area and in other towns we distributed people with

unspecified incomes in proportion to the number of people in the lowest and highest income brackets. For rural areas with the extremely high percentage of persons with unspecified income - a fact which is probably due to the prevalence of subsistence agriculture - we followed a somewhat more complicated approach by estimating agricultural labor income ^{1/} which subsequently was attributed to the different income classes on the basis of the average incomes calculated for persons specified by the survey.

5. Total labor income (as estimated according to the above methods) accounts for about G 2,720 million or about 61% of national income in 1976. The remaining G 1,729 million or 39% are considered income from entrepreneurship and property and attributed to people in urban areas falling into the highest income bracket. The assumption regarding the urban residence of these people may be justified by the fact that rural areas in Haiti are little attractive and that the urban sector comprises even communities with a population of little more than 1,000 inhabitants. Income from entrepreneurship and property was distributed between the Port-au-Prince metropolitan area and the other towns in proportion to total labor income calculated for these areas.

6. The 39% share of non-labor income in national income seems to be high when compared to the distribution in industrial countries where the share normally ranges between 20 and 30%. However, when compared to other developing countries, the Haitian distribution falls into the normal range of 35 to 55%. This distribution between labor and non-labor income reflects both the relative scarcity of the factors of production and the power structure within the social system.

7. We estimate that about 30% of the non-labor income comes from land property thus leaving 70% or G 1,210 million for remunerating entrepreneurs and the capital stock bound in directly productive activities. Total capital stock in 1976 is estimated at G 16,175 million of which about G 9,220 million are considered directly productive, i.e., not bound in infrastructure and housing (see Table V-5). Thus, the overall return on capital is in the order of 13%--a rate that does appear reasonable and plausible.

^{1/} In Haiti most people active in agriculture are to be considered self-employed or family aides. Thus, in principle, they are remunerated from operating surpluses. However, not all the agricultural income is attributable to persons considered economically active in the sector. Part of the income (30%) is rental and capital income incurred by (absentee) landlords and financial intermediaries. We, therefore, applied the concept of labor income which seems to be most in line with the other incomes specifically measured by the IHS survey. The agricultural sector's gross value added in 1976 is estimated at G 905 million in 1955 prices and at G 2,267 million in 1976 prices. Net value added at factor cost is estimated to amount to 90% of gross value added.

8. Gross national savings in 1976 amounted to about 10.9% of GNP which is relatively low when compared to the relatively high share of non-labor income in national income. It is, therefore, to be inferred that substantial amounts of non-labor income are transferred to other countries. It is estimated that the outflow of private unrequited transfers and short-term capital amounted to about G 200 million in 1976. The private sector's gross savings in 1976 are estimated at about G 465 million, of which about G 330 million may have come from non-labor incomes. Income tax revenues accounted for another G 60 million, of which about G 56 million may be attributed to non-labor incomes. Savings and income taxes accounted for about 22 percent of non-labor income, transfers for different purposes for another 12 percent. The income share left for consumption was 66-78 percent - a share that again appears reasonable.

9. With the background of the above deliberations the estimate of non-labor income seems to be plausible. Thus, the picture presented in table 1.7 is most likely to reflect the actual situation of income distribution in Haiti. It should be taken as starting point for further considerations, particularly with regard to taxation of high incomes, which, however, go beyond the scope of this report.

ANNEX

TECHNICAL NOTE ON ESTIMATING THE REGIONAL INCIDENCE OF THE FISCAL SYSTEM
(tax revenues and fiscal expenditures)
AND OF PLANNED GOVERNMENT DEVELOPMENT EXPENDITURES
(see Tables 1.11 and 1.17)

A. TAX REVENUES (see Table 1.11)

1. Tax revenues accounted for about 60% of total current government revenues in FY1975/76. The balances are non-tax revenues and, above all, revenues from unidentifiable sources. Tax revenues comprise internal revenues (consisting of excise, income, property and other taxes) and customs receipts (consisting of import duties and export taxes). Two different approaches were followed for estimating the regional incidence of the two categories of revenues.

2. The estimate of the regional incidence of internal revenues in FY1975/76 starts from the receipts by financial districts as reported by the Administration Generale des Contributions. Since the Port-au-Prince district comprises the Central Region and excise taxes are levied on production (and thus in the district where the factory is located rather than at the place of consumption), the receipts by district are far from reflecting the actual regional incidence of the tax system, and the appropriate adjustments had to be made. Furthermore, the delimitation of the financial districts is different from that of other administrative or statistical units. Thus, the regional breakdown had to be limited to the Port-au-Prince area, provincial towns and rural areas.

3. The adjustment for taxes incurred by the Central Region but collected in the Port-au-Prince district is based on the Central Region's share in the population of the areas outside Port-au-Prince, which is about 8.7%. Total internal tax revenues outside the Port-au-Prince area being G 9.5 million in FY1975/76, the adjustment amounts to G 0.8 million. This assumption presupposes that the per-capita tax burden in the Central Region is the same as in the rest of the country (outside the Port-au-Prince area).

4. In order to correct for the discrepancy between the formal and actual incidence of excise taxes (at the place of production and consumption respectively) we assumed a direct relationship between labor income and consumption. The estimate was based on the geographical distribution of labor income rather than that of total national income in order to reflect better the regressive character of excise taxes. Thus, excise taxes, which amounted to G 24.9 million in FY1975/76 were singled out and distributed according to the share in labor income of the Port-au-Prince area and the rest of the country (20.6:79.4, see Table 1.6). Given the nature of the excise taxes and the concentration of industrial production in the Port-au-Prince area, we assumed that all the excise taxes are collected in the Port-au-Prince district. However, according to the above distribution, only G 5.1 million

ANNEX

are actually shouldered by the population living in the Port-au-Prince area. Thus, the amount of G 19.8 million in excise taxes had to be subtracted from tax receipts in the Port-au-Prince district and be added to those of the rest of the country. Consequently, the Port-au-Prince area bears about G 96 million or 76% of internal revenues; whereas the rest of the country bears about G 30 million or 24%. This part of the tax burden was distributed between provincial towns and rural areas according to their respective shares in national income (31.6:78.4, see table 1.7) thus reflecting specifically the taxation of high incomes in provincial towns.

5. As far as customs receipts are concerned we separated the coffee export taxes from other receipts. The coffee export taxes are ultimately borne by the coffee producers and thus by rural areas. Other receipts comprise mainly import duties (about 74%) and the bauxite export taxes (about 25%). These latter represent a special case within the whole tax system. They are generated by an enclave activity, which, in the absence of these taxes, would not yield larger non-tax benefits to the country (e.g. in the form of higher salaries or a higher contribution to national savings). So it could be argued that these taxes are not really borne by the Haitian economy. Nevertheless, we included them in other customs receipts and treated them as quasi-income tax. Other custom receipts were attributed to the different regions in proportion to their respective shares in national income assuming that imports (which are the main source of these receipts) are a function of total income in the different regions.

6. Taking the incidence of internal revenues and customs receipts together we obtain the regional incidence of the whole tax system. Thus, we estimate that the Port-au-Prince area bears about 47% of the total tax burden, the provincial towns about 12% and rural areas about 41%.

B. FISCAL EXPENDITURES (see table 1.11)

7. Whereas the above figures are likely to reflect the actual incidence of the tax system, available data for expenditures only allow an assessment of the formal regional incidence. However, starting from the formal incidence and taking the sectoral breakdown of expenditures into account one can develop a rough idea of the actual regional incidence of expenditures.

8. Fiscal expenditures comprise only recurrent budgetary expenditures other than expenditures from earmarked funds. They exclude all the expenditures from extrabudgetary accounts as well as development expenditures. In FY1975/76 they represented less than one-third of government expenditures.

9. The estimate of the regional incidence is based on actual cash disbursements in the different financial districts as reported by the Direction du Tresor. Since the geographical coverage of these districts differs from that of all other administrative or statistical units we restricted the regional breakdown of our analysis to the Port-au-Prince area and the rest of the country. (A further breakdown into provincial towns and rural areas according to the methods applied for tax revenues

would not hold in the case of expenditures since these are not related to income). Fiscal expenditures are divided into three categories: salaries, operating expenditures and subsidies. Whereas salaries and operating expenditures are disbursed and reported where they actually occur (with the exception of some centralized purchases) subsidies are exclusively disbursed through the central financial administration. In the case of salaries and operating expenditures, adjustments had to be made for the Central Region which is covered by the Port-au-Prince district. The adjustment was made according to the Central Region's share in the population of the rest of the country outside the Port-au-Prince area. The regional breakdown of subsidies is based on an analysis of budgeted items for FY1975/76.

10. Following the approach described above we obtain an estimate of the formal regional incidence: about 83% of fiscal expenditures occur in the Port-au-Prince area, about 17% in the rest of the country. The actual regional incidence, however, is different from this picture. A slight change occurs if recurrent expenditures of municipalities (net of government subsidies that are included in government fiscal expenditures) of G 3.1 million in FY1975/76 are also taken into account. Furthermore, even considering the low effectiveness of the Haitian civil service, part of the services rendered and thus part of the salaries paid in Port-au-Prince as well as part of the operating expenditures incurred in Port-au-Prince actually benefit the rest of the country. A rough sectoral analysis of budgeted expenditures in FY1975/76 suggests that about 42% of salaries and operating expenditures incurred in the Port-au-Prince area have to be attributed to the rest of the country. Taking this estimate and the municipal expenditures into account, the actual incidence of expenditures on the Port-au-Prince area is likely to be in a range of 50%-55%.

C. PLANNED GOVERNMENT DEVELOPMENT EXPENDITURES (see table 1.17)

11. The basis for future government development expenditures is the second Five-Year Plan for the period 1976/1981. However, the different sectoral programs in the Plan vary in concreteness: whereas in some sectors most of the envisaged projects have been identified and prepared and have the financial support of external aid agencies, projects in other sectors have rather the character of project ideas, some of which will probably not get any external support and therefore entirely depend on the availability of local finance. Thus, the Plan would not have been the appropriate basis for our analysis. Therefore, we limited our analysis of the spatial incidence of future government development expenditures to the projects that have already been approved by the Government, have the support of external agencies, 1/ and are, therefore, likely to be actually implemented within the near future.

1/ See CONADEP: Projets d'investissement et d'assistance technique avec financement externe par secteur, agence, organisme d'exécution selon l'état d'avancement, la durée et le type (dons, prêts), Version préliminaire, October 1977.

12. Our analysis covers all projects approved as of the end of 1977 as well as some projects that will be approved within the next few months. With a total volume of about US\$480 million these projects represent the bulk of development expenditures envisaged for the plan period from 1976 to 1981. ^{1/} Thus, the estimate of the regional incidence is likely to be fairly representative for the whole program.

13. The analysis was carried through on a project-by-project basis focusing on the localization of the projects. For most of the projects the available information allowed to identify the localization at the departmental level and with regard to urban and rural areas. In some cases the localization could only be specified with regard to urban and rural areas. Finally, for highway projects linking several departments, the assessment of the spatial incidence was made roughly in proportion to the population of the affected areas (although it is likely that the benefits are rather shared in proportion to income). Thus, it is possible to identify the spatial impact of the whole program of government development expenditures in broad terms, i.e. with regard to the Port-au-Prince metropolitan area, other towns and rural areas. For about 68% of the expenditures, it is even possible to estimate the impact at the departmental level and with regard to urban and rural areas.

^{1/} Total development expenditures planned for 1976/1981 amount to about US\$600 million (at 1976 prices). The figure of US\$480 million for projects already approved is not entirely comparable since project cost estimates normally allow for expected price increases. However, the impact of anticipated price increases cannot be quantified on the basis of the available information.

Table 1.1: POPULATION BY DEPARTEMENT ^{1/} AND ARRONDISSEMENT, 1950 AND 1971

Administrative Unit	Total Population			Urban Population			Rural Population		
	Thousands		Av. Annual growth (%)	Thousands		Av. Annual growth (%)	Thousands		Av. Annual growth (%)
	1950	1971		1950	1971		1950	1971	
Département de l'Ouest	624.8	1151.8	3.0	162.7	523.2	5.7	462.0	628.6	1.5
Port-au-Prince	413.8	877.3	3.6	151.9	506.5	5.9	261.9	370.8	1.7
Léogane	211.0	274.5	1.3	10.8	16.7	2.1	200.1	257.8	1.2
Département du Nord	431.4	583.1	1.4	60.8	101.4	2.5	370.6	481.8	1.3
Cap Haïtien	118.2	199.8	2.5	29.4	54.7	3.0	88.8	145.1	2.4
Grande Rivière du Nord	106.5	100.4	-0.3	9.3	16.1	2.6	97.1	84.3	-0.7
Trou du Nord	52.3	69.3	1.4	11.9	14.4	0.9	40.4	54.9	1.5
Borgne	57.6	80.3	1.6	3.3	5.7	2.6	54.3	74.5	1.5
Pl. isance	57.2	96.8	2.5	3.0	4.0	1.4	54.3	92.8	2.6
Limbe	39.6	36.5	-0.4	3.9	6.5	2.5	35.7	30.0	-0.8
Département du Nord-Est	107.7	116.8	0.4	14.1	16.4	0.7	93.4	100.3	0.3
Port Liberté	64.4	68.9	0.3	12.2	12.9	0.3	52.2	56.0	0.3
Valières	43.3	47.9	0.5	1.9	3.5	3.0	41.4	44.3	0.3
Département du Nord-Ouest	168.3	216.5	1.2	13.5	26.1	3.2	154.8	190.4	1.0
Port-de-Paix	115.8	136.4	0.8	10.8	21.7	3.4	105.0	114.7	0.4
Île St. Nicolas	52.5	80.1	2.1	2.7	4.4	2.3	49.8	75.7	2.0
Département de l'Artibonite	466.9	622.2	1.4	41.3	76.3	3.0	425.8	546.1	1.2
Gonaïves	165.7	186.7	0.6	17.9	36.7	3.5	147.9	150.1	0.1
Dessalines	129.1	174.6	1.5	8.9	13.3	1.9	120.2	161.3	1.4
St. Marc	96.6	147.6	2.1	11.4	20.5	2.8	85.3	127.1	1.9
Maitelade	75.5	113.3	2.0	3.1	5.8	3.0	72.4	107.6	1.9
Département du Centre	256.0	300.1	0.8	15.2	26.6	2.7	240.9	273.5	0.6
Hinche	100.3	133.5	1.4	7.6	14.2	3.0	92.7	119.3	1.2
Nirebalais	114.1	126.5	0.5	4.2	7.1	2.5	110.0	119.4	0.4
Lascahobas	41.6	40.1	-0.2	3.4	5.3	2.2	38.2	34.8	-0.4
Département du Sud-Est	302.6	351.3	0.7	14.7	19.4	1.3	287.9	331.8	0.7
Belle Anse	56.9	52.2	-0.4	2.2	3.0	1.6	54.7	49.2	-0.5
Jacmel	245.7	299.1	1.0	12.5	16.4	1.3	233.2	282.6	0.9
Département du Sud	375.3	519.7	1.6	29.2	42.2	1.8	346.1	477.5	1.5
Cayes	195.2	272.7	1.6	15.8	27.2	2.6	179.4	245.4	1.5
Côteaux	56.2	86.4	2.1	7.7	9.7	1.1	48.5	76.7	2.2
Aquin	123.9	160.6	1.3	5.7	5.3	-0.4	118.2	155.4	1.3
Département du Grande Anse	364.3	453.1	1.0	27.2	47.8	2.7	336.9	405.2	0.9
Jeremie	175.4	240.9	1.6	15.7	25.1	2.3	159.6	215.7	1.5
Tiburon	47.1	61.9	1.3	5.5	13.0	4.2	41.5	48.9	0.8
Anse à Veau (Nippes)	141.8	150.3	0.3	6.0	9.7	2.3	135.8	140.6	0.2
TOTAL	3097.2	4314.6	1.6	378.8	879.7	4.1	2718.4	3434.9	1.1

^{1/} 9 départements.

Source: IHS - Guide Economique de la République d'Haïti, 1977
May 1, 1978

Table 1.2 : POPULATION BY DEPARTEMENT ^{1/} AND ARRONDISSEMENT, HAITI 1950 AND 1971

Administrative Unit	Total Population			Urban Population			Rural Population		
	in 1950	1000 1971	Av. annual growth	in 1950	1000 1971	Av. Annual growth	in 1950	1000 1971	Av. annu growth
<u>Département Ouest</u>	<u>1083.1</u>	<u>1669.7</u>	<u>2.1</u>	<u>185.0</u>	<u>555.0</u>	<u>5.4</u>	<u>898.1</u>	<u>1114.6</u>	<u>1.0</u>
Port-au-Prince	413.8	877.3	3.6	151.9	506.5	5.9	261.9	370.8	1.7
Léogane	211.0	274.5	1.3	10.8	16.7	2.1	200.1	257.8	1.2
Jacmel	245.7	299.1	1.0	12.5	16.4	1.3	233.2	282.6	0.9
Belle-Anse	56.9	52.2	-0.4	2.2	3.0	1.6	54.7	49.2	-0.5
Mirebalais	114.1	126.5	0.5	4.2	7.1	2.5	110.0	119.4	0.4
Lascahobas	41.6	40.1	-0.2	3.4	5.3	2.2	38.2	34.8	-0.4
<u>Département Nord</u>	<u>539.1</u>	<u>699.9</u>	<u>1.3</u>	<u>74.9</u>	<u>117.8</u>	<u>2.2</u>	<u>464.2</u>	<u>581.9</u>	<u>1.1</u>
Cap Haïtien	118.2	199.8	2.5	29.4	54.7	3.0	88.8	145.1	2.4
Trou du Nord	52.3	69.3	1.4	11.9	14.4	0.9	40.4	54.9	1.5
Grande Rivière du Nord	106.5	100.4	-0.3	9.3	16.1	2.6	97.1	84.3	-0.7
Fort-Liberté	64.4	68.9	0.3	12.2	12.9	0.3	52.2	56.0	0.3
Plaisance	57.2	96.8	2.5	3.0	4.0	1.4	54.3	92.8	2.6
Limbé	39.6	36.5	-0.4	3.9	6.5	2.5	35.7	30.0	-0.8
Borgne	57.6	80.3	1.6	3.3	5.7	2.6	54.3	74.5	1.5
Vallières	43.3	47.9	0.5	1.9	3.5	3.0	41.4	44.3	0.3
<u>Département Artibonite</u>	<u>567.2</u>	<u>755.7</u>	<u>1.4</u>	<u>48.9</u>	<u>90.5</u>	<u>3.0</u>	<u>518.5</u>	<u>665.4</u>	<u>1.2</u>
Gonaïves	165.7	186.7	0.6	17.9	36.7	3.5	147.9	150.1	0.1
St. Marc	96.6	147.6	2.1	11.4	20.5	2.8	85.3	127.1	1.9
Marmelade	75.5	113.3	2.0	3.1	5.8	3.0	72.4	107.6	1.9
Hinche	100.3	133.5	1.4	7.6	14.2	3.0	92.7	119.3	1.2
Dessalines	129.1	174.6	1.5	8.9	13.3	1.9	120.2	161.3	1.4
<u>Département Sud</u>	<u>739.5</u>	<u>972.8</u>	<u>1.3</u>	<u>56.4</u>	<u>90.0</u>	<u>2.3</u>	<u>683.0</u>	<u>882.7</u>	<u>1.2</u>
Cayes	195.2	272.7	1.6	15.8	27.2	2.6	179.4	245.4	1.5
Aquin	123.9	160.6	1.3	5.7	5.3	-0.4	118.2	155.4	1.3
Côteaux	56.2	86.4	2.1	7.7	9.7	1.1	48.5	76.7	2.2
Grand'Anse	175.4	240.9	1.6	15.7	25.1	2.3	159.6	215.7	1.5
Tiburou	47.1	61.9	1.3	5.5	13.0	4.2	41.5	48.9	0.8
Anse à Veau	141.8	150.3	0.3	6.0	9.7	2.3	135.8	140.6	0.2
<u>Département Nord-Ouest</u>	<u>168.3</u>	<u>216.5</u>	<u>1.2</u>	<u>13.5</u>	<u>26.1</u>	<u>3.2</u>	<u>154.8</u>	<u>190.4</u>	<u>1.0</u>
Port-de-Paix	115.8	136.4	0.8	10.8	21.7	3.4	105.0	114.7	0.4
Môle St. Nicolas	52.5	80.1	2.1	2.7	4.4	2.3	49.8	75.7	2.0
<u>TOTAL</u>	<u>3097.2</u>	<u>4314.6</u>	<u>1.6</u>	<u>378.8</u>	<u>879.7</u>	<u>4.1</u>	<u>2718.4</u>	<u>3434.9</u>	<u>1.1</u>

1/ 5 Départements

Source: IHS - Guide Economique de la République d'Haïti, 1977.

May 1, 1978

Table 1.3 : SIZE DISTRIBUTION OF URBAN POPULATION BY ARRONDISSEMENT, HAITI 1950, 1971, 1975

Arrondissements	1950		1971		1975	
	% of Total Urban Population	Rank	% of Total Urban Population	Rank	% of Total Urban Population	Rank
Port-au-Prince	40.1	1	57.6	1	60.4	1
Cap Haitien	7.8	2	6.2	2	5.1	2
Gonaives	4.7	3	4.2	3	3.3	3
Cayes	4.2	4	3.1	4	2.4	4
Jérémie	4.1	5	2.8	5	1.9	6
Jacmel	3.3	6	1.9	9	1.2	
Fort-Liberté	3.2	7	1.5	15	N.A.	
Trou du Nord	3.1	8	1.6	11	N.A.	
St Marc	3.0	9	2.3	7	1.9	5
Léogane	2.9	10	1.9	8	N.A.	
Port-de-Paix	2.8	11	2.5	6	1.6	7
Grande Rivière du Nord	2.5	12	1.8	10	N.A.	
Dessalines	2.4	13	1.5	13	N.A.	
Côteaux	2.0	14	1.1	17	N.A.	
Hinche	2.0	15	1.6	12	N.A.	
Anse à Veau	1.6	16	1.1	16	N.A.	
Aquin	1.5	17	0.6	23	N.A.	
Tiburon	1.5	18	1.5	14	N.A.	
Mirebalais	1.1	19	0.8	18	N.A.	
Limbé	1.0	20	0.7	19	N.A.	
Lascahobas	0.9	21	0.6	22	N.A.	
Borgne	0.9	22	0.7	21	N.A.	
Marmelade	0.8	23	0.7	20	N.A.	
Plaisance	0.8	24	0.5	25	N.A.	
Môle St Nicolas	0.7	25	0.5	24	N.A.	
Belle Anse	0.6	26	0.3	27	N.A.	
Vallières	0.5	27	0.4	26	N.A.	
<u>TOTAL</u>	%	100.0			100.0	
	abs. figure	378806		879708		1033570

Source: IHS - Guide Economique de la Republique d'Haiti, 1977

May 1, 1978

Table 1.4: RESIDENT POPULATION OF DEPARTMENTAL
CAPITALS, HAITI 1976

Departement	Capital	Population
Ouest	Port-au-Prince (Metropolitan area)	652,900
Nord	Cap Haitien	53,797
Nord-Est	Fort-Liberte	3,509
Artibonite	Gonaives	35,096
Centre	Hinche	9,487
Sud-Est	Jacmel	12,165
Sud	Cayes	25,711
Grand Anse	Jeremie	19,697
Nord-Ouest	Port-de-Paix	16,735

Source: Institut Haitien de Statistiques.

July 20, 1978

Table 1.5(a): NET MIGRATION (INTERNAL & EXTERNAL)
BY DEPARTEMENT - HAITI 1973

Département	Net Migration			% of popu- lation	Population mid 1973 (1000)
	Internal	International	Total		
Ouest	+23873	-15414	+8459	+4.9	1730.0
Nord	-2946	-1236	-4182	-5.8	718.6
Artibonite	-3820	-882	-4702	-6.1	773.7
Sud	-14649	-852	-15501	-15.6	990.7
Nord-Ouest	-2458	-173	-2631	-11.7	224.7
Total	0	-18557	-18557	-4.2	4437.7

Source: Institut Haitien de Statistiques,

May 1, 1978

Table 1.5(b): CUMULATED NET MIGRATION ^{1/} BY DÉPARTEMENT AND AREA OF RESIDENCE
HAITI 1971

	Number of Persons	% of Resident Population
Migrants Département Ouest	+13841	+1.2
Urban areas	-906	-1.5
Rural areas	+14747	+1.3
Migrants Aire Métropolitaine	+102771	+20.8
Migrants Département Nord	-27426	-3.9
Urban areas	-5905	-5.0
Rural areas	-21521	-3.7
Migrants Département Artibonite	+4627	+0.6
Urban areas	+9446	+10.5
Rural areas	-4819	-0.7
Migrants Département Sud	-88392	-9.1
Urban areas	-14795	-16.4
Rural areas	-73597	-8.3
Migrants Département Nord-Ouest	-5421	-2.5
Urban areas	+1716	+6.4
Rural areas	-7137	-3.7

1/ Cumulated net migration = resident population - population born in the area.

Source: Institut Haitien de Statistiques.

May 1, 1978

Table 1.6. DISTRIBUTION OF LABOR INCOME BY INCOME CLASSES AND GEOGRAPHIC REGIONS, HAITI 1976

Income class (annual income in G)	Country Total					Urban Areas					Metropolitan Area (Port-au-Prince)				
	Average income for class	Employed Persons		Labor Income		Average income for class	Employed Persons		Labor Income		Average income for class	Employed Persons		Labor Income	
		in 1000	%	in 1000 G	%		in 1000	%	in 1000 G	%		in 1000	%	in 1000 G	%
<1200	684.5	1287.8	68.4	881555.4	32.4	660.1	134.7	45.9	88914.5	10.7	630.3	38.0	26.2	23951.4	4.3
1200 - 2500	1824.7	389.9	20.7	711459.3	26.2	1739.7	36.1	12.3	62802.4	7.5	1755.8	16.7	11.5	29321.9	5.2
2501 - 5000	3534.6	157.4	8.4	556350.1	20.4	3674.0	96.4	32.8	354171.7	42.4	3684.6	69.6	47.9	256448.2	45.7
5001 - 7500	7039.8	22.7	1.2	159603.2	5.9	7500.0	7.0	2.4	52500.0	6.3	7500.0	5.4	3.7	40500.0	7.2
7501 - 10000	9060.1	9.9	0.5	89694.5	3.3	9050.1	9.9	3.4	89694.5	10.8	9108.2	8.0	5.5	72865.6	13.0
10001 - 12500	10500.0	6.1	0.3	64050.0	2.4	10500.0	3.5	1.2	36750.0	4.4	10500.0	3.0	2.1	31500.0	5.6
12501 - 15000	15000.0	2.7	0.1	40500.0	1.5	15000.0	1.8	0.6	27000.0	3.2	15000.0	1.7	1.2	25500.0	4.6
>15000	30000.0	7.2	0.4	216000.0	7.9	30000.0	4.1	1.4	123000.0	14.7	30000.0	2.7	1.9	81000.0	14.4
TOTAL	1443.7	1883.7	100.0	2719412.5	100.0	2844.4	293.5	100.0	834833.1	100.0	3866.9	145.1	100.0	561087.1	100.0
Average income in rural areas=100	122					240					326				
Average income per head of total population	581.9					891.0					1107.1				
Average per-capita income in rural areas=100	115					177					220				
	Other Towns					Rural Areas									
	Average income for class	Employed Persons		Labor Income		Average income for class	Employed Persons		Labor Income		Average income for class	Employed Persons		Labor Income	
		in 1000	%	in 1000 G	%		in 1000	%	in 1000 G	%		in 1000	%	in 1000 G	%
<1200	671.8	96.7	65.1	64963.1	23.7	687.4	1153.1	72.5	792640.9	42.1					
1200 - 2500	1725.8	19.4	13.1	33480.5	12.2	1833.1	353.8	22.5	648656.9	34.4					
2501 - 5000	3646.4	26.8	18.1	97723.5	35.7	3314.4	61.0	3.8	202178.4	10.7					
5001 - 7500	7500.0	1.6	1.1	12000.0	4.4	6834.6	15.7	1.0	107303.2	5.7					
7501 - 10000	8857.3	1.9	1.3	16828.9	6.1	-	0	0	0	0					
10001 - 12500	10500.0	0.5	0.3	5250.0	1.9	10500.0	2.6	0.2	27300.0	1.5					
12501 - 15000	15000.0	0.1	0.1	1500.0	0.6	15000.0	0.9	0.1	13500.0	0.7					
>15000	30000.0	1.4	0.9	42000.0	15.4	30000.0	3.1	0.2	93000.0	4.9					
TOTAL	1844.6	148.4	100.0	273746.0	100.0	1185.2	1590.2	100.0	1884579.4	100.0					
Average income in rural areas=100	156					100									
Average income per head of total population	636.3					504.4									
Average per-capita income in rural areas=100	126					100									

Source: IHS - Enquête à buts multiples, 1976; Mission estimates

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Source: IHS - Enquête a buts multiples, 1976; Mission estimates.
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Table 1.0 - MINIMUM PER-CAPITA CONSUMERS EXPENDITURE BY ZONES AND REGIONS, HAITI 1976

Consumption Items	Daily per-caput Consumption ^{a/} Grams/day Cal/day	Cost at Port-au-Prince			Cost at Cap-Haïtien			Cost at Conception			Cost at Les Cayes			Cost at Jérémie			Cost in rural areas		
		Unit price C/ Kg ^{b/}	Cost per day in C	Cost per year in C	Unit price C/ Kg ^{b/}	Cost per day in C	Cost per year in C	Unit price C/ Kg ^{b/}	Cost per day in C	Cost per year in C	Unit price C/ Kg ^{b/}	Cost per day in C	Cost per year in C	Unit price C/ Kg ^{b/}	Cost per day in C	Cost per year in C	Unit price C/Kg ^{c/}	Cost per day in C	Cost per year in C
<u>Grains</u>	220	792	1.49	545.5	1.36	500.3	545.5	1.440	522.9	545.5	1.385	505.5	545.5	1.429	521.7	545.5	0.97	0.213	472.2
Rice	60	184	2.50	94.8	2.50	94.8	94.8	2.50	94.8	94.8	2.50	94.8	94.8	2.50	94.8	94.8	2.50	0.150	54.8
Beans and tubers ^{d/}	80	99	0.77	28.5	0.70	25.6	25.6	0.66 ^{e/}	26.4	26.4	0.51	20.8	20.8	0.43	15.3	15.3	0.48	0.038	14.0
Soybean ^{f/}	22	84	2.20	88.8	2.20	88.8	88.8	2.20	88.8	88.8	2.20	88.8	88.8	2.20	88.8	88.8	2.20	0.048	17.7
Pulses ^{g/}	110	371	2.80	308.0	2.74	301.4	301.4	2.64	290.4	290.4	2.63	289.9	289.9	2.54	280.0	280.0	2.54	0.213	85.3
Cauliflowers/Cabbages	40	11	1.12	44.8	1.10	44.0	44.0	1.07	42.8	42.8	1.05	42.0	42.0	1.02	40.8	40.8	1.02	0.041	16.4
Plantains	43	34	4.43	188.5	4.04	163.6	163.6	4.04	163.6	163.6	4.04	163.6	163.6	4.04	163.6	163.6	4.04	0.034	12.6
Other fruit (mango)	40	24	0.54	21.6	0.39	15.6	15.6	0.39	15.6	15.6	0.33	13.2	13.2	0.29	11.6	11.6	0.29	0.012	4.2
Meat (pork)	40	108	7.13	285.2	7.39	270.6	270.6	6.84	273.6	273.6	6.61	264.4	264.4	6.41	256.4	256.4	6.41	0.279	101.9
Oil and fat ^{h/}	34	300	6.67	227.8	6.67	227.8	227.8	6.67	227.8	227.8	6.67	227.8	227.8	6.67	227.8	227.8	6.67	0.227	82.8
Coffee	9	4	7.25	65.3	7.25	65.3	65.3	6.32	56.9	56.9	6.61	60.0	60.0	7.65	68.9	68.9	5.55	0.050	18.2
<u>Protein</u>				527.5		527.5	527.5		521.1	521.1		505.5	505.5		490.3	490.3			497.8
<u>Other food items</u>				214.2		214.2	214.2		213.2	213.2		202.2	202.2		206.7	206.7			195.8
<u>Total</u>				741.7		741.7	741.7		734.3	734.3		707.7	707.7		697.0	697.0			693.6

^{a/} Average per-caput consumption based on consumption pattern of a typical family of five persons (consisting of 1 adult male, 1 adult female, 1 child in school age, 2 children of 3 years).

^{b/} 10% rice; 43% maize; 47% sorghum

^{c/} 60% sweet potato; 27% manioc; 13% yam

^{d/} Different types of peas

^{e/} Rice, sorghum

^{f/} Average prices April-September 1976 on Port-au-Prince market; partially estimated

^{g/} Average prices April-August 1976 on Cap-Haïtien market; partially estimated

^{h/} Average prices April-September 1976 on Conception market; partially estimated

^{i/} Sweet potatoes only

^{j/} Average prices July-September 1976 on Les Cayes market; partially estimated

^{k/} Average prices April-August 1976 on Jérémie market; partially estimated

^{l/} Weighted average prices for provincial towns less 20% marketing cost (except for bread, sugar, meat, oil)

^{m/} Estimated on the basis of IHS - Enquête socio-économique, 1970, adjusted for inflation

^{n/} Assumption: Non-food items = 40% of food items

Sources: Diet calculated by Dr. Donas, Nutritional Expert, FAO, Port-au-Prince; Prices from Min. of Commerce and IICA publications; Mission estimates.

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Table 1.9: PEOPLE LIVING UNDER CONDITIONS OF ABSOLUTE POVERTY, HAITI 1976

Region	Minimum Consumer Expenditure per year in G		Percentage of Total Population with Per-Caput Income Lower than Minimum Expenditures <u>a/</u>	
	Per-Caput I <u>b/</u>	Per-Caput II <u>c/</u>	I <u>b/</u>	II <u>c/</u>
Country Total	1000.5	702.6	89.7	73.8
Urban Areas	1082.1	794.0	70.7	55.2
Metropolitan Area	1113.0	819.7	60.4	39.2
Other Towns	1045.7 <u>d/</u>	754.7 <u>d/</u>	82.9	74.1
Rural Areas	980.0	675.1	94.4	78.4

a/ Adjustments made for group-specific participation rate.

b/ See footnote 13 table 1.8.

c/ See footnote 14 table 1.8.

d/ Weighted average of 4 provincial towns.

Source: Tables 1.7, 1.8; Mission estimates.

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Table 1.10: NUTRITIONAL STATUS OF CHILDREN AGED 0-6 BY REGION, HAITI 1976

Region	Number of Children examined	Percentage distribution					
		Normal	1°	2°	3°	M	K ^{a/}
Southern Urban	1098	15.2	21.3	39.7	20.9	1.2	1.7
Southern Rural	1812	17.7	35.1	32.2	13.8	0.9	0.3
Northern Urban	1325	9.6	30.2	42.1	16.8	0	1.3
Northern Rural	1354	8.1	33.4	38.6	16.9	0.9	2.1
TOTAL	<u>5589</u>	<u>13.0</u>	<u>30.8</u>	<u>37.6</u>	<u>16.7</u>	<u>0.7</u>	<u>1.2</u>
Urban	2423	12.1	26.2	41.0	18.7	0.5	1.5
Rural	3166	13.6	34.4	34.9	15.1	0.9	1.1

a/ First, second, third degree malnourished (according to Gómez scale)

M= Marasmus

K= Kwashiorkor

Source: Enquête de Dr. Serge Tureau Dec.74-Janvier 1975 (OMS/PAHO); Data adjusted by Mission

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Table 1.11: REGIONAL INCIDENCE OF FISCAL SYSTEM, HAITI 1975/76

a) Tax revenues (millions of G)

Regional Units	Internal revenues (1)	Adjust- ments ^{1/} (2)	Internal revenues ^{2/} adjusted (3)=(1)+(2)	Coffee ex- port tax (4)	Other customs ^{3/} receipts (5)	Customs receipts (6)=(4)+(5)	Total current tax revenues (7)=(3)+(6)	Percentage distribution
Port-au-Prince	116.4	-20.6	95.8		56.0	56.0	151.8	47.2
Rest of the country	9.5	+20.6	30.1		86.6	140.0	170.1	52.8
Provincial towns	.		9.7		28.1	28.1	37.8	11.7
Rural areas	.		20.4	53.4	58.5	111.9	132.3	41.1
TOTAL	125.9	0	125.9	53.4	142.6	196.0	321.9	100.0

**b) Fiscal expenditures (millions of G)
(on cash basis)**

	Salaries (1)	Adjust- ments for Central Region(2)	Salaries adjusted (3)=(1)+(2)	Operating expenditures (4)	Adjust- ments for Central Region(5)	Operating expenditures adjusted (6)=(4)+(5)	Subsidies ^{4/} (7)	Expenditures (8)=(3)+(6)+(7)	Percentage distribution
Port-au-Prince	104.2	-2.1	102.1	38.6	-0.2	38.4	17.6	158.1	82.7
Rest of the country	24.5	+2.1	26.6	1.9	+0.2	2.1	4.4	33.1	17.3
TOTAL	128.7	0	128.7	40.5	0	40.5	22.0	191.1	100.0

^{1/} Adjustments for Central Region (+0.8) and assumed incidence of excise taxes (19.8) according to regional distribution of labour incomes (cf Table 1.6)

^{2/} Breakdown of rest of the country according to regional distribution of national income (cf Table 1.7)

^{3/} Regional incidence according to regional distribution of national income (cf Table 1.7)

^{4/} Regional incidence based on budget for FY 1975/76

Source: Ministry of Finance; Administration Générale des Contributions; IMF; Mission estimates.

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Table 1.12: AGRICULTURAL COMMODITY PRICES, HAITI 1970 AND 1974
(MARKET PRICES AT DIFFERENT PLACES IN US\$ PER METRIC TON)

<u>Rice</u>	<u>Weights</u> ^{1/}	<u>1970</u>	<u>1974</u>
Port-au-Prince	506	299.8	564.4
Croix des Bouquets	371	317.5	537.9
St. Marc	148	286.6	546.7
Cap Haitien	118	401.2	582.0
Jacmel	246	405.6	568.8
Les Cayes	195	343.9	533.5
Jérémie	175	374.8	463.0
Gonaives	166	269.0	449.7
Total (weighted)	1925	330.6	537.3
World marked price ^{2/}		144.0	542.0
<u>Millet</u>			
Port-au-Prince	506	114.6	189.6
Croix des Bouquets	371	105.8	145.5
St. Marc	148	83.8	119.0
Jérémie	175	97.0	119.0
Total (weighted)	1200	105.5	157.0
World market price ^{2/}		51.8	121.0
<u>Grain Corn</u>			
Port-au-Prince	506	75.0	189.6
Croix des Bouquets	371	88.2	154.3
St. Marc	148	88.2	145.5
Cap Haitien	118	83.8	145.5
Jacmel	246	119.0	189.6
Les Cayes	195	83.8	167.5
Jérémie	175	92.6	145.5
Gonaives	166	75.0	141.1
Total (weighted)	1925	87.2	166.3
World market price ^{2/}		58.4	132.0

^{1/} 1971 Population in area of influence (thousands)

^{2/} From World Bank commodity price forecasts, October 21, 1977.

Source: IICA: Agricultural product prices in Haitian market places,
March 1975; Mission estimates.

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Table 1.13 AGRICULTURAL COMMODITY PRICES, HAITI 1968-1974
(MARKET PRICES AT DIFFERENT PLACES, ANNUAL AVERAGES, 1968=100)

	Weights ^{1/}	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Rice	92	100	100.9	107.9	126.2	128.6	177.6	177.9
Millet	37	100	90.3	94.9	97.0	89.6	164.6	136.9
Grain Corn	92	100	87.5	103.6	110.5	118.5	219.1	192.5
Red Beans	57	100	97.7	96.1	106.5	119.4	155.3	171.9
Bananas	51	100	108.9	111.2	114.0	130.9	173.2	181.4
Sweet Potatoes	13	100	92.5	93.1	107.4	101.7	116.5	127.4
Yuca	4	100	84.9	89.4	101.5	105.4	116.2	120.5
Coffee	100	<u>100</u>	<u>96.7</u>	<u>147.2</u>	<u>99.5</u>	<u>128.3</u>	<u>190.9</u>	<u>197.2</u>
Total (weighted)	446	<u>100</u>	<u>96.4</u>	<u>113.0</u>	<u>109.9</u>	<u>121.3</u>	<u>182.4</u>	<u>179.5</u>
		=====	=====	=====	=====	=====	=====	=====
Total without coffee		100	96.3	103.1	112.9	119.2	179.9	174.4
GDP deflator		100	102.5	105.8	108.7	112.0	140.6	158.4
Consumer prices (Port-au-Prince)								
Food		100	105.6	105.9	110.8	151.3	151.3	171.9
Non-food (clothing and housing)		100	105.9	106.0	117.8	113.0	121.8	144.0

^{1/} 1971 Agricultural production at 1955 prices (6 million)/ represents about 50% of agricultural production.

Source: IICA: Agricultural product prices in Haitian market places, March 1975; Mission estimates.

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Table 1.14: IDAI LOANS BY DEPARTEMENT, 1972-1975
(PERCENTAGES)

Département	1971/72	1972/73	1973/74	1974/75
Nord	2.3	1.9	2.1	1.6
Nord-Ouest	0.2	0.2	0.1	0.1
Artibonite	34.4	42.6	49.3	42.0
of which: Plateau Central	4.9	5.1	5.2	6.6
Ouest	45.2	37.1	33.1	45.7
Sud	17.9	18.2	15.4	10.6
of which: Grande Anse	1.3	1.2	1.1	0.6
Total %	100.0	100.0	100.0	100.0
1000¢	12126.3	12875.7	14212.2	21027.5

Source: IDAI

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Table 1.15: TEACHERS AND SCHOOL-AGE POPULATION^{1/} PER TEACHER BY DEPARTEMENT, HAITI 1975-76

Départements	PRIMARY EDUCATION						SECONDARY EDUCATION (URBAN AREAS)	
	Total		Urban		Rural		Number of teachers ^{2/}	Population aged 10-19 per teacher
	Number of teachers	Population aged 5-14 per teacher	Number of teachers	Population aged 5-14 per teacher	Number of teachers	Population aged 5-14 per teacher		
Nord	1991	104.4	1607	23.9	384	441.4	604	61.4
Nord-Ouest	636	100.8	527	17.5	109	504.3	103	88.5
Artibonite	1450	153.6	1118	27.7	332	578.0	278	102.6
Ouest	6376	78.6	5801	32.7	575	540.9	2023	101.1
Sud	2050	134.7	1690	17.6	360	684.8	272	85.0
Total	12503	101.7	10743	27.8	1760	553.4	3280	93.9

^{1/} Population aged 5-14 years (primary education) and 10-19 years (secondary education).

^{2/} Number of teachers refers to FY1976-77.

Source: Ministry of Education: Mission estimates.

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Table 1.16 : PUBLIC DEVELOPMENT EXPENDITURES BY SECTORS, HAITI 1972-1981

(Percentages)

Sector	Actual Pattern FY 1972/73 - FY 1974/75 Average	Development budget FY 1977/78	Plan 1976-1981 (Approved projects <u>1/</u>)
Power	7.4	9.7	8.6
Transport	34.1	29.5	34.5
Communications	13.3	5.1	0.2
Agriculture	11.1	22.0	23.8
Industry <u>2/</u>	2.9	5.3	2.3
Tourism	0.7	0.8	0.1
Water Supply	1.6	2.9	4.6
Education	6.8	6.9	9.8
Health	8.5	6.4	10.3
Community Development	7.1	4.0	3.5
Housing	0.4	3.7	1.8
Other Administrations <u>3/</u>	-	3.7	0.5
Preinvestment	6.1	<u>.4/</u>	<u>.4/</u>
Total %	100.0	100.0	100.0
US\$ million	36.6	179.3	479.6

1/ Projects approved by the end of 1977 or to be approved within next few months.

2/ Incl. mining

3/ Incl. social affairs

4/ Incl. in all other categories

Source: CONADEI

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Table 1.17: SPATIAL DISTRIBUTION OF PUBLIC DEVELOPMENT EXPENDITURES^{1/}

HAITI 1976-1981 (PERCENTAGES)

Region/Subregion	Total	Non-agri- cultural	Population	
			in 1971	in 1976
Urban Areas	46.1	59.3	20.4	23.1
Metropolitan Port-au-Prince	28.2	37.0	11.7	14.0
Other towns	17.9	22.3	8.7	9.1
				76.9
Rural Areas	53.9	40.7	79.6	100.0
Total	100.0	100.0	100.0	
% 1000 US\$	479609	365742		
Metropolitan Port-au-Prince	28.2	37.0	11.7	
Nord	11.4	10.5	13.6	
Urban	3.5	4.6	2.4	
Rural	7.9	5.9	11.2	
Nord-Est	0.4	0.4	2.7	
Urban	0.2	0.2	0.4	
Rural	0.2	0.2	2.3	
Nord-Ouest	3.5	0.6	5.0	
Urban	0.4	0.5	0.6	
Rural	3.1	0.1	4.4	
Artibonite	6.7	5.6	14.4	
Urban	3.1	4.1	1.8	
Rural	3.6	1.5	12.6	
Centre	2.1	0.2	6.9	
Urban	0.2	0.2	0.6	
Rural	1.9	0	6.3	
Ouest	6.1	5.1	15.0	
Urban	0.6	0.3	0.4	
Rural	5.5	4.8	14.6	
SudEst	0.4	0.4	8.1	
Urban	0.3	0.4	0.4	
Rural	0.1	0	7.7	
Sud	6.1	5.7	12.1	
Urban	0.9	1.1	1.0	
Rural	5.2	4.6	11.1	
Grande Anse	3.2	1.6	10.5	
Urban	1.2	1.1	1.1	
Rural	2.0	0.5	9.4	
Location not specified	31.9	32.9		
Urban	7.5	9.8		
Rural	24.4	23.1		
Total	100.0	100.0	100.0	

^{1/} Only approved projects and projects to be approved within the next few months

Source: CONADEP; Mission estimates.

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Table 2.1: EMPLOYMENT AND SALARIES IN THE INDUSTRIAL ENTERPRISES OF THE MODER SECTOR IN HAITI BY INDUSTRIAL BRANCH AND ACCORDING TO REGISTRATIONS IN THE INSURANCE SYSTEM (OYADHA) IN NINE URBAN CENTERS IN 1975/76

Industrial Branch	Group	Port-au-Prince			Jeremie			Port de Paix			Les Cayes			Saint Marc			Cocaïves			Petit Cavae			Jacmel			Cap Haïtien			TOTAL			Percentages			
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3				
Food	20	147	3,684	13,746,511	9	21	53,950	6	13	27,768	11	23	58,970	62	175	220,760	2	15	163,150	7	12	30,615	5	21	56,088	29	314	826,132	278	4,478	13,183,944	27.8	25.48	25.59	
Alcoholic and non-alcoholic beverages	21	90	816	3,061,344	15	43	108,155	3	5	12,675			82	202,932	14	24	59,670	7	39	138,530	17	34	84,290	-	-	-	59	163	428,719	240	1,206	4,059,415	24.0	6.80	6.90
Tobacco	22	1	205	2,054,834	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	206	2,054,834	0.2	1.16	3.46		
Textiles and steel	23	15	1,559	3,676,072	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	50	136,890	-	-	-	2	27	63,312	20	1,636	3,876,274	2.0	9.23	6.53	
Shoes - Clothing - Manufacturing	24	130	2,326	6,297,245	-	-	-	-	-	-	1	2	9,070	-	-	-	1	20	19,000	-	-	-	-	-	-	-	-	-	132	2,346	6,321,315	13.2	13.26	10.65	
Wood and Cork	25	4	15	24,165	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	15	24,165	0.4	0.08	0.04		
Furniture - Cabinet Making	26	30	222	548,897	-	-	-	-	-	-	1	3	7,603	1	2	9,070	-	-	-	-	-	-	-	-	-	9	30	54,655	41	257	661,237	4.1	1.43	1.15	
Printing and Publishing	28	9	66	357,659	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	5,742	10	88	363,401	1.0	0.49	0.43		
Leathers - Fur and Plastic	29	16	1,238	3,936,748	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	25,350	17	1,308	3,982,098	1.7	7.37	6.71		
Chemicals	31	15	492	1,278,762	-	-	-	-	-	-	12	127	314,732	-	-	-	3	15	24,375	1	15	241,267	1	4	10,140	1	2	5,070	33	655	1,674,346	3.3	3.70	3.16	
Non-metallic mineral products	32	28	776	4,771,411	-	-	-	1	2	9,070	1	2	9,070	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	780	4,781,531	3.0	4.40	8.06		
Metallic works	35	22	409	1,672,790	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	10,205	23	413	1,682,995	2.3	2.33	2.83		
Mechanical engineering	36	10	145	636,240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	145	636,240	1.0	0.82	1.07		
Mechanical work shops	37	16	1,405	4,718,700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	1,405	4,718,700	1.6	7.61	7.55		
Transport equipment	38	46	412	2,147,709	3	5	12,675	-	-	-	2	4	10,725	1	2	9,070	-	-	-	-	-	-	-	-	-	-	-	51	423	2,176,170	5.1	2.18	3.67		
Various manufactures	39	52	2,339	6,228,502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	2,349	6,296,707	9.3	13.26	11.62		
Manufacturing Industries	TOTALS	671	16,390	53,706,580	27	69	174,880	10	20	45,313	63	243	605,104	78	202	290,570	13	69	345,055	28	111	493,062	6	25	66,228	104	562	1,567,395	1,000	17,712	59,333,387	100.0	100.00	100.00	
Percentages	%	67.1	92.53	93.981	2.7	0.39	0.294	1	0.11	0.086	6.3	1.37	1.036	7.8	1.15	0.495	1.3	0.50	0.561	2.8	0.63	0.841	0.6	0.14	0.122	10.4	3.18	2.961	100	100	100				

Source: OYADHA for period 1975/76. Table prepared by J.M. Damico

SOURCE: OYADHA

1. Number of enterprises
2. Number of employees
3. Salaries (in gourdes)

Table 2.2: EMPLOYMENT IN PORT-AU-PRINCE, 1975

<u>Sector</u>	<u>Thousands of persons</u>	<u>%</u>
Modern Sector	<u>83.0</u>	<u>30.0</u>
Manufacturing industries	28.0	10.1
Construction	5.7	2.1
Transport	2.5	0.9
Commerce	16.4	5.9
Banking	2.7	1.0
Services	27.7	10.0
of which Tourism	3.1	1.1
Liberal professions	6.5	2.4
Public administration	4.9	1.8
Social services, education	6.5	2.3
Other	6.7	2.4
Informal Sector	<u>194.0</u>	<u>70.0</u>
Micro commerce	40.0	14.4
Hand craft	2.0	0.7
Domestic services	78.0	28.2
Other services	74.0	26.7
Total	<u>277.0</u>	<u>100.0</u>

Source: Projet de Planification Physique. op. cit.

N.B.: Coverage in this Table is incomplete.

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ANNEX

Table 2.3: EMPLOYMENT IN THE BUILDING INDUSTRY, PORT-AU-PRINCE 1976

<u>Item</u>	<u>Investment</u>	<u>% to labour</u>	<u>Average Daily Wage Rate</u>	<u>Average Workday Frequency</u>	<u>Estimated Annual Employment</u>
Housing, low income	1.8	25	\$1.00	150	3,000
Housing, middle income	5.7	30	\$1.50	150	7,600
Housing, high income	21.2	33	\$2.00	200	17,700
Industry and Commerce	11.7	20	\$2.00	200	5,800
Public Works	2.1	33	\$1.50	300	1,600
Total	42.5	---	---	---	35,700

Source: World Bank estimate based on PADCO data.

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Table 3.1: COST OF CONSTRUCTION MATERIALS IN PORT-AU-PRINCE (US\$1976)

<u>Item</u>	<u>Unit</u>	<u>Price (\$)</u>	<u>Price Increase</u> <u>1970-1976</u>
Small Tree Trunks (5cm. dia)	dozen	2.00-7.00	--
Quarry Stone	m ³	2.50	50%
Rocks	m ³	5.00	50%
Wattle	m ²	6.00	--
Blocks, 10cm.-vibrated	each	0.12	--
-nonvibrated	each	0.12	--
Blocks, 15cm.-vibrated	each	0.14	55%
-nonvibrated	each	0.13	
Blocks, 20cm.-vibrated	each	0.16	45%
-nonvibrated	each	0.16	
Wood Planks, scrap	m ²	3.00-5.00	--
Wood Planks, local-wholesale	m ²	2.50	105%
-retail	m ²	3.60	
Wood Planks, imported-wholesale	m ²	3.50	65%
-retail	m ²	5.00	
Sheet Metal, scrap	each=m ²	0.90	--
Corrugated Sheets, inferior	each=m ²	2.00	30%
Corrugated Sheets, inferior	hundred	140.00	
Corrugated Sheets, superior	each=m ²	3.00	20%
Corrugated Sheets, superior	hundred	175.00	
Asphalt Panels	each=m ²	4.90	30%
Sand-delivered by wheelbarrow	m ³	8.50	65%
-delivered by truck	m ³	5.00	
Cement	sack	2.40	60%
Reinforcing Steel	pound	0.21	130%
Reinforcing Steel	1,000 lbs.	190.00	

Source: Projets et Planification en Haiti , Vol. IV: Logement, CONADEP/
Louis Berger International, Port-au-Prince, February 1977

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Table 3.2: WAGES IN HOUSING CONSTRUCTION (US\$1976 per day)

<u>Method of Payment</u>	<u>Unskilled</u>	<u>Semi-Skilled</u>	<u>Skilled</u>
	<u>Labourer</u>	<u>Labourer</u>	<u>Worker</u>
Lump-sum contract, low income	0.60	1.40-1.80	--
Payment per m ² , middle income	0.70-0.80	2.00-2.20	--
Lump-sum contract, middle income	0.70-0.80	2.00-2.20	--
Payment per m ² , high income	1.00-1.20	2.00-3.00	3.00-4.00

Source: PPHC, Phase III, Vol. V, op. cit.

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Table 3.3: STRUCTURE OF HOUSING CONSTRUCTION COSTS (US\$1976 per m²)

<u>Builder</u>	<u>Walls and Structure</u>	<u>Roof</u>	<u>Materials (\$/m²)</u>	<u>Labour (\$/m²)</u>	<u>Total (\$/m²)</u>	<u>Ratio of Materials to Labour</u>
Low Income	Scrap	Scrap or Straw	5- 10	2- 3	7- 13	2.5
	Wattle	Straw	15- 20	5- 7	20- 27	3.0
	Wood	Sheet Metal	20- 30	5- 8	25- 38	4.0
	Blocks	Sheet Metal	25- 35	10-13	35- 48	2.5
Middle Income	Blocks	Sheet Metal	50- 80	25-40	75-120	2.0
High Income	Blocks	Concrete	90-140	45-70	135-210	2.0

Source: PPHC, Phase III, Vol. V, op. cit.

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Table 3.4: EVOLUTION OF COSTS OF ST. MARTIN UPGRADING PROGRAM

Item	PPHC Early 1976 (US\$)	DATPE/U.N. Late 1976 (US\$)	FCH, MARCH 1977			DATPE/UN Oct. 1977 (US\$)	CONSULTANT'S ESTIMATE OF CURRENT PROGRAM (US\$)			
			Cost (US\$)	Finance Source	Cost Recovery (US\$)		UNCDF	UNDP	GOV'T	TOTAL
Land	42,000	---	328,000	GOVT.	---	---	---	---	210,000	210,000
Infrastructure (incl. community facilities)	294,000	327,519	327,579	UNCDF	75,152	620,500	546,000		74,500	620,500
Housing	42,000	81,000	81,000	UNCDF	81,000	346,000			346,000	346,000
Revolving and Mortgage funds	---	---	275,000	UNCDF	275,000	---	460,000			460,000
Communal Labor	---	---	74,250	Beneficiaries	---	1/				1/
Contingencies and Inflation	---	40,852	63,302	UNCDF	15,615	---	262,000			262,000
Organization and Development	23,000	28,593	168,000	GOVT/UNCDF	168,000	---	40,000	846,800	424,900	1,311,700 ^{2/}
Total:	401,000	477,964	1,316,971		614,767	966,500	1,308,000	846,800	1,055,400	3,209,700^{3/}

1/ Housing costs are for materials and supervision only. An additional labor component of about US\$104,000 would have to be added to total costs for this item.

2/ For both pilot projects.

3/ Organization and Development expenditures cover both St. Martin and Drouillard. It is not clear whether the US\$75,000 shown for this item in the penultimate column of Table 3.5 is included here or not.

Source: Avant Projet pour la Rehabilitation du Quartier St. Martin, op. cit., Assessment Report to the UNCDF, op. cit. UNCDF Project Description Document; St. Martin Slum Clearance and Rehabilitation, (HA1/76/C31).

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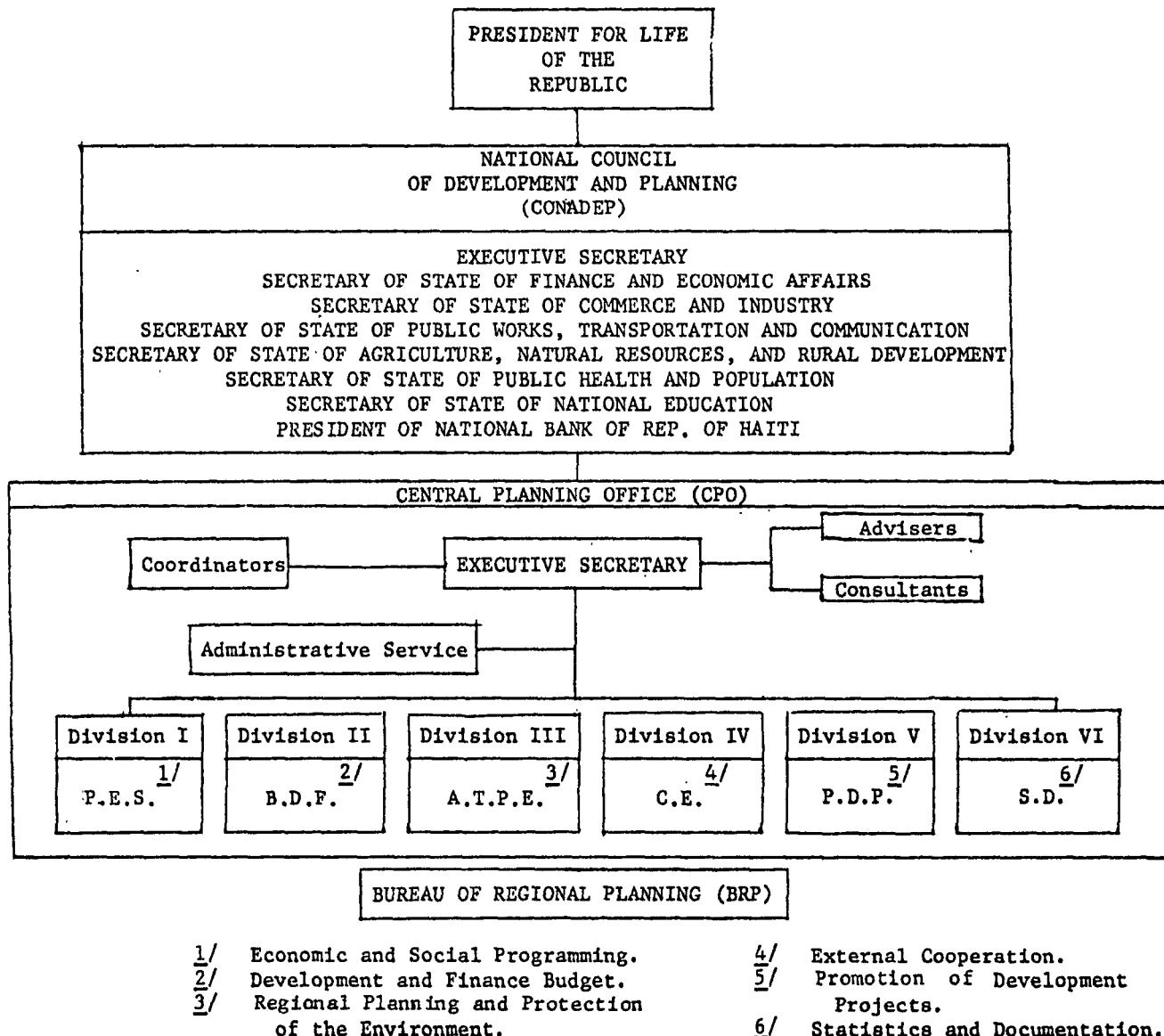
Table 3.5: EVOLUTION OF COSTS OF DROUILLARD SITES AND SERVICES PROJECT

<u>Item</u>	DATPE/U.N.	<u>FCH, MARCH 1977</u>			DATPE/UN	Planned
	<u>Late</u> 1976 (US\$)	<u>Cost</u> (US\$)	<u>Finance</u> <u>Source</u>	<u>Cost</u> <u>Recovery</u> (US\$)	<u>Oct. 1977</u> (US\$)	<u>UNCDF</u> <u>Contribution</u> (US\$)
Land	93,000	93,000	GOV'T	---	93,000	
Site Preparation	62,000	62,000	UNCDF	87,200	68,200	520,000
Infrastructure	265,100	265,100	UNCDF		291,700	
Housing	176,708	61,440	UNCDF	61,400	825,500	
Revolving Fund	--	550,000	UNCDF	550,000	---	560,000
Communal Labour	--	278,175	Beneficiaries	---	---	
Contingencies	50,380	103,105	UNCDF	14,700	---	324,000
Organization and Development	35,267	42,000	GOV'T + UNCDF	42,000	75,000	
<u>Total</u>	682,450	1,454,800	---	755,384	1,353,400	1,404,000
				Government Contribution		125,000
				<u>Total</u>		1,529,000

Sources: Esquisse de Projet Pour Parcelles Assainis/Drouillard, op. cit.
Assessment Report to the UNCDF, op. cit.
UNCDF Project Description Document: Sites and Services (HAI/76/C32)

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ORGANIZATION CHART
NATIONAL COUNCIL OF DEVELOPMENT AND PLANNING
(CONADEP)
DECREE OF 14th OCTOBER, 1976



November 1977

ORGANIZATION CHART OF THE DEPARTMENT OF PUBLIC WORKS, TRANSPORTATION AND COMMUNICATIONS

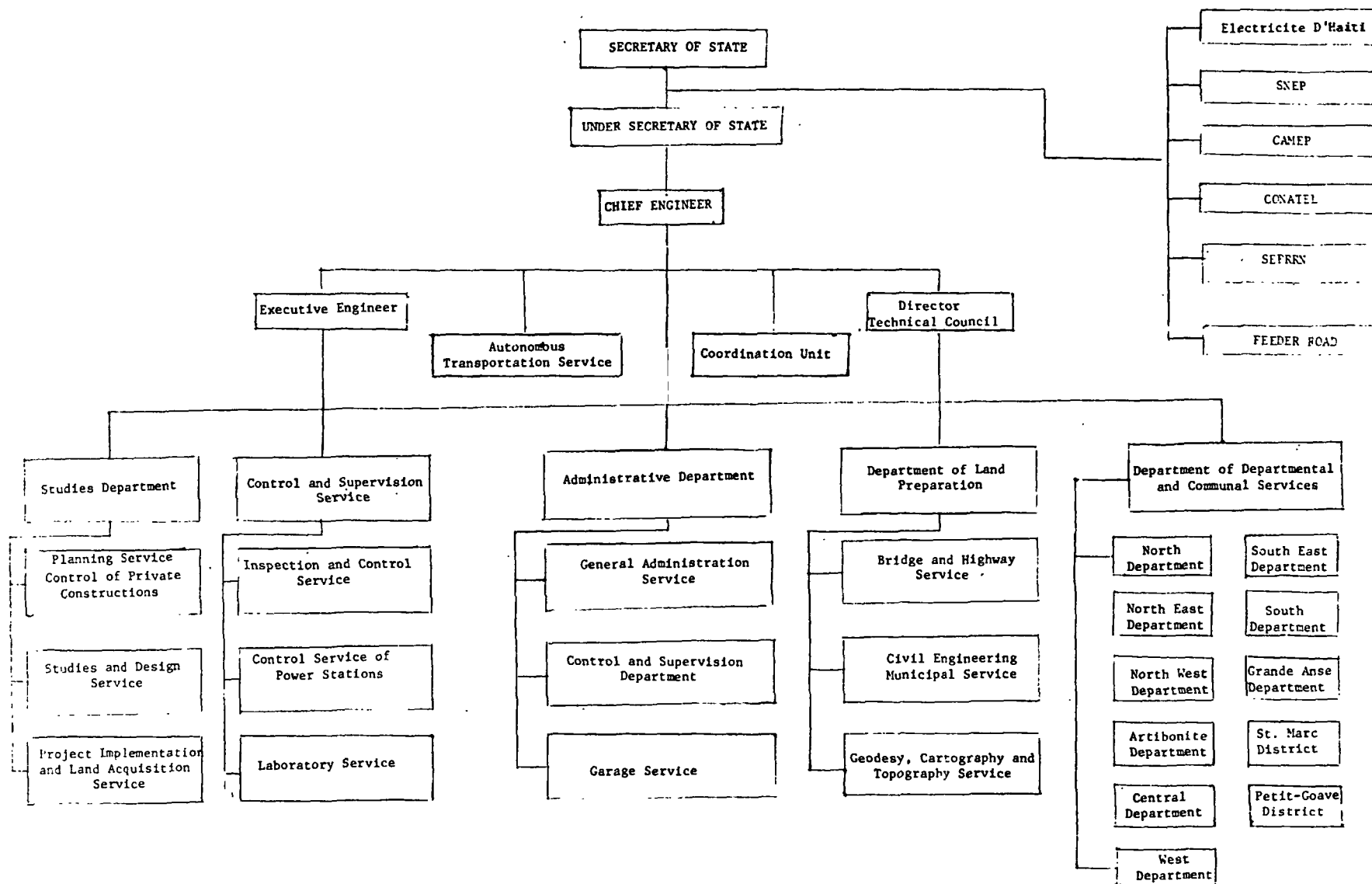


Table 4.1: TAX RECEIPTS OF SELECTED MUNICIPALITIES AFTER DEDUCTIONS - GOURDES

<u>Municipality</u>	<u>FY: 72/73</u>	<u>FY: 73/74</u>	<u>FY: 74/75</u>	<u>FY: 75/76</u>	<u>FY: 76/77</u>
Port au Prince	2,869,890	3,002,086	2,618,527	3,652,764	3,706,207
Cap-Haitier	312,952	303,944	197,299	220,893	227,372
Cayes	129,496	134,243	88,916	103,853	105,839
Jacmel	86,120	116,684	59,312	63,998	73,976
Gonaives	104,516	117,487	79,549	83,488	89,213

Source: Ministry of Finance

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Table 5.1: DEMOGRAPHIC PROJECTIONS BY REGIONS AND SPATIAL STRATEGY, HAITI 1976-2001
(Thousands of inhabitants)

Region/Subregion	1976 ^{1/}	1981	1986				1991				1996				2001			
			I ^{2/}	II ^{3/}	III ^{4/}	IV ^{5/}	I	II	III	IV	I	II	III	IV	I	II	III	IV
Département de l'Ouest	1240.2	1305.1	1364.3	1378.0	1372.6	1372.9	1414.9	1471.0	1448.3	1449.6	1452.3	1572.3	1526.8	1529.6	1476.4	1670.7	1604.1	1609.3
Urban	65.8	71.8	78.6	78.6	78.6	78.9	85.3	85.3	85.3	86.6	91.4	91.4	91.4	94.2	96.5	96.5	96.5	101.7
Rural	1174.4	1233.3	1285.7	1299.4	1294.0	1294.0	1329.6	1385.7	1363.0	1363.0	1360.9	1480.9	1435.4	1435.4	1379.9	1574.2	1507.6	1507.6
Metropolitan Area	647.5	851.7	1121.4	1062.5	1084.9	1081.9	1439.6	1201.8	1295.0	1282.9	1790.5	1292.8	1474.4	1447.1	2161.3	1372.5	1628.3	1579.4
Département du Nord	758.3	818.3	879.4	886.6	883.7	884.3	938.9	969.9	957.5	960.0	995.2	1062.4	1037.1	1042.6	1049.0	1158.8	1121.3	1131.3
Urban	131.8	148.2	166.4	166.4	166.4	167.0	184.4	184.4	184.4	186.9	201.1	201.1	201.1	206.6	217.0	217.0	217.0	227.0
Rural	626.5	670.1	712.8	720.2	717.3	717.3	754.5	785.5	773.1	773.1	794.1	861.3	836.0	836.0	832.0	941.8	904.3	904.3
Département du Nord-Ouest	229.3	240.1	247.2	252.1	249.8	250.0	250.3	270.1	261.7	262.6	248.7	291.5	275.3	277.4	243.8	314.0	290.3	294.1
Urban	31.5	37.5	44.4	43.9	44.2	44.4	51.8	49.6	50.8	51.7	58.9	54.4	56.9	59.0	66.0	58.9	62.6	66.4
Rural	197.8	202.6	202.8	208.2	205.6	205.6	198.5	220.5	210.9	210.9	189.8	237.1	218.4	218.4	177.8	255.1	227.7	227.7
Département de l'Artibonite	823.6	880.4	933.0	941.8	938.8	939.6	981.1	1017.4	1004.3	1007.6	1022.7	1101.4	1074.4	1082.3	1059.2	1188.1	1148.3	1161.8
Urban	106.5	126.1	148.0	146.1	147.2	148.0	170.9	162.9	167.6	170.9	193.5	176.8	185.9	193.8	216.0	189.3	203.0	216.5
Rural	717.1	754.3	785.0	795.7	791.6	791.6	810.2	854.5	836.7	836.7	829.2	924.6	888.5	888.5	843.2	998.8	945.3	945.3
Département du Sud	977.0	960.6	916.1	943.4	932.8	933.9	846.5	958.9	913.6	917.9	753.1	993.6	902.6	912.1	639.5	1029.8	896.1	913.6
Urban	97.8	107.6	118.7	118.7	118.7	119.8	129.8	129.8	129.8	134.1	139.9	139.9	139.9	149.4	148.7	148.7	148.7	160.2
Rural	879.2	853.0	797.4	824.7	814.1	814.1	716.7	829.1	783.8	783.8	613.2	853.7	762.7	762.7	490.8	881.1	747.4	747.4
Total	4675.9	5056.2	5461.2	5464.4	5462.6	5462.6	5871.3	5889.1	5880.4	5880.4	6262.5	6314.0	6290.6	6291.1	6629.2	6733.9	6688.4	6689.5
Urban	1080.9	1342.9	1677.5	1616.2	1640.0	1640.0	2061.8	1813.8	1912.9	1912.9	2475.3	1956.4	2149.6	2150.1	2905.5	2082.9	2356.1	2357.2
Rural	3595.0	3713.3	3783.7	3848.2	3822.6	3822.6	3809.5	4075.3	3967.5	3967.5	3787.2	4357.6	4141.0	4141.0	3723.7	4651.0	4332.3	4332.3

1/ Projected from 1971 census data

2/ Strategy I = development under status quo conditions

3/ Strategy II = forced rural development

4/ Strategy III = realistic rural development

5/ Strategy IV = realistic rural development cum balanced urban development

Source: Mission estimates based on IHS data.

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Table 5.2: POPULATION GROWTH AND STRUCTURE BY URBAN AND RURAL AREAS BY SPATIAL STRATEGY, HAITI 1950-2001

a) Structure (percentages)

Regions	1950	1971	1976	1986				2001			
				I	II	III	IV	I	II	III	IV
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Urban Areas	12.2	20.4	23.1	30.7	29.6	30.0	30.0	43.8	30.9	35.2	35.2
Port-au-Prince	4.9	11.7	13.8	20.5	19.4	19.9	19.8	32.6	20.4	24.3	23.6
Other towns	7.3	8.7	9.3	10.2	10.2	10.1	10.2	11.2	10.5	10.9	11.6
Rural Areas	87.8	79.6	76.9	69.3	70.4	70.0	70.0	56.2	69.1	64.8	64.8

b) Average annual growth rates (percentages)

	1950-1971	1971-1976	1976-1986				1986-2001			
			I	II	III	IV	I	II	III	IV
Total	1.6	1.5	1.6	1.6	1.6	1.6	1.3	1.4	1.4	1.4
Urban areas	4.1	4.2	4.5	4.1	4.3	4.3	3.7	1.7	2.4	2.4
Port-au-Prince	5.9	5.6	5.6	5.1	5.3	5.3	4.5	1.7	2.7	2.5
Other towns	2.4	2.3	2.5	2.5	2.5	2.5	2.0	1.7	1.8	2.2
Rural Areas	1.1	0.8	0.5	0.7	0.6	0.6	-0.1	1.3	0.8	0.8

Source: Tables 1.1 and 5.1

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Table 5.3: LABOR FORCE^{1/} BY REGIONS, HAITI 1976, 1986 AND 2001
(Thousands of economically active persons)

	1976	1 9 8 6				2 0 0 1			
		I	II	III	IV	I	II	III	IV
Total	2568.1	2717.9	2790.5	2789.2	2789.0	3197.3	3357.3	3338.0	3337.6
Urban areas	515.2	769.7	747.9	761.4	761.2	1282.2	984.5	1220.0	1119.6
Port-au-Prince	312.7	518.9	498.4	511.2	509.5	951.6	662.8	789.7	764.8
Other towns	202.5	250.8	249.5	250.2	251.7	330.6	321.7	330.3	354.8
Rural areas	2052.9	1948.2	2042.6	2027.8	2027.8	1915.1	2372.8	2218.0	2218.0

^{1/} Labor force participation rates estimated by ILO: 1975: 50.50%
1980: 49.95%
1985: 49.03%
1990: 48.16%
2000: 48.68%

Source: ILO (Projection of participation rates); Mission estimates

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Table 5.4: INCREASES IN POPULATION AND LABOUR FORCE BY REGION, HAITI 1976-1986-2001
(Thousands of persons)

	1976 - 1986								1986 - 2001							
	TOTAL INCREASE				AVERAGE ANNUAL INCREASE ^{1/}				TOTAL INCREASE				AVERAGE ANNUAL INCREASE ^{1/}			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
<u>Population</u>																
Total	785.3	788.5	786.7	786.7	78.5	78.9	78.7	78.7	1164.8	1269.5	1225.8	1226.9	77.7	84.8	81.7	81.8
Urban areas	596.6	535.3	559.1	559.1	59.7	53.5	55.9	55.9	1228.0	466.7	716.1	717.2	81.9	31.1	47.7	47.8
Port-au-Prince	473.9	415.0	437.4	434.4	47.4	41.5	43.7	43.4	1040.0	310.0	543.4	497.5	69.3	20.7	36.2	33.2
Other towns	122.7	120.3	121.7	124.7	12.3	12.0	12.2	12.5	188.0	156.7	172.7	219.7	12.5	10.4	11.5	14.6
Rural areas	188.7	253.2	227.6	227.6	18.9	25.3	22.8	22.8	-60.0	802.8	509.7	509.7	-4.0	53.5	34.0	34.0
<u>Labour force</u>																
Total	149.8	224.4	221.1	220.9	15.0	22.2	22.1	22.1	479.4	566.8	548.8	548.6	32.0	37.8	36.6	36.6
Urban areas	254.5	232.7	246.2	246.0	25.5	23.3	24.6	24.6	512.5	236.6	358.6	358.4	34.2	15.8	23.9	23.9
Port-au-Prince	206.2	185.7	198.5	196.8	20.6	18.6	19.9	19.7	432.7	164.4	278.5	255.3	28.8	11.0	18.6	17.0
Other towns	48.3	47.0	47.7	49.2	4.8	4.7	4.8	4.9	79.8	72.2	80.1	103.1	5.3	4.8	5.3	6.9
Rural areas	-104.7	-10.3	-25.1	-25.1	-10.5	-1.0	-2.5	-2.5	-33.1	330.2	190.2	190.2	-2.2	22.0	12.7	12.7

^{1/} Figures may not add to total due to rounding

Source: Tables 5.1 and 5.3

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Table 5.5: CAPITAL STOCK, HAITI 1976

Region	Capital stock 1976 (millions of ₣)			Capital stock per caput (₣)	
	Total	Infrastruc- ture incl. housing	Directly productive capital	Infrastructure per head of population	Dir. prod. Cap. per head of ec.act. pop.
Total	16,175.0	6,955.0	9,220.0	1,489.9	3,590.2
Urban area	9,321.9	4,008.3	5,313.6	3,714.5	10,462.8
Port-au-Prince	6,265.5	2,694.1	3,571.4	4,126.4	11,586.6
Other towns	3,056.4	1,314.0	1,742.4	3,083.1	8,728.6
Rural area	6,853.1	2,946.7	3,906.4	821.0	1,865.3

Source: Mission estimates

August 7, 1978

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ANNEX

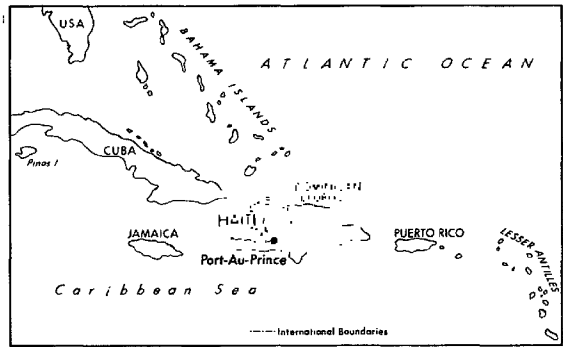
2/ Target values 1976: Per-capita capital stock in 1976 (see table 5.5); differences between Port-au-Prince and other towns as well as between other towns and rural areas reduced by 50%.

4/ Target values 1986; 1976 target figures + 4% annual growth; regional differences a

Replacement = per-capita replacement of 1976 capital stock multiplied by total pop

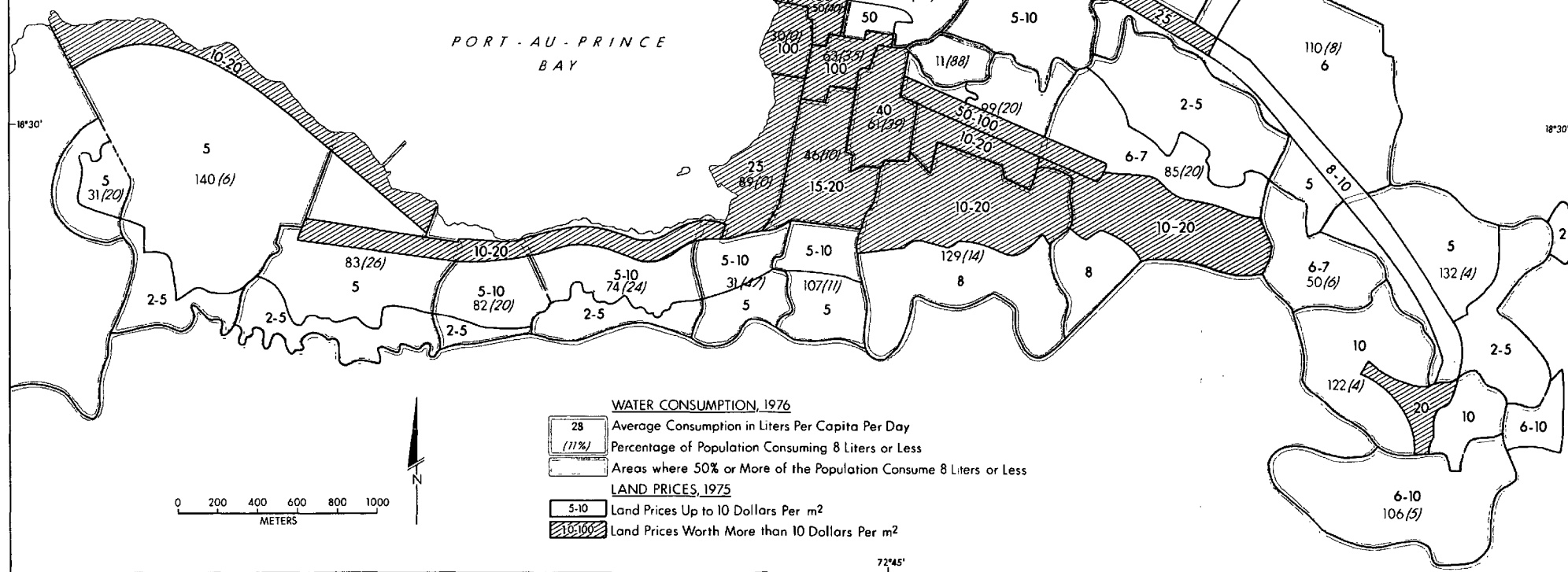
August 29, 1978

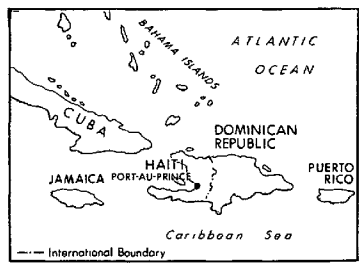
N.B.: Population data for 1976 differ from those used in Chapter I and related Annex Tables for income distribution calculations. Data used here is derived from the 1971 census which gives higher population figures for Port-au-Prince than those of the "Enquête à but multiple", op. cit., used in income distribution statistics.



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HAITI PORT-AU-PRINCE WATER CONSUMPTION, 1976/LAND PRICES, 1975





HAITI PORT - AU - PRINCE RESIDENTIAL POPULATION DENSITY, 1975

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