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HAITI

AGRICULTURAL SECTOR ASSESSMENT

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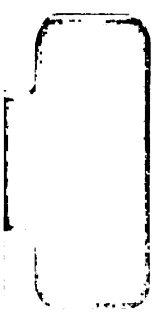

HAITI AGRICULTURAL SECTOR ASSESSMENT (1991)

PREFACE

This report examines the evolution of Haiti's agricultural sector, focusing primarily on the issue of rural poverty viewed in the context of the economic policies and adjustment programs undertaken by the government during the last decade. It also highlights Haiti's present institutional system, with emphasis on public agricultural institutions and non-governamental organizations (NGOs) operating in the country.

The report is organized into seven sections. Section I provides a brief overview of political and demographic aspects of Haitian society. Section II examines the overall, economy-wide framework that will be used to analyze the performance of the agricultural sector in the last decade. Section III looks at the economic policy interventions made during the 1980's which have affected the orientation of agricultural policy. Section IV focuses specifically on the agricultural policies that have had a major impact on the production and transformation process in Haitian agriculture. Section V examines the evolution of Haitian agriculture, focusing on the main factors that have contributed to agricultural stagnation during the 1980's. Section VI discusses small-farm agriculture, and seeks to characterize the main aspects of rural poverty in Haiti. Finally, Section VII assesses the present scope and status of the Haitian public system, with emphasis on public agricultural institutions and NGOs.

In reading this report, it should be kept in mind that the study was developed in an environment characterized by many information gaps and data that could not always be considered reliable. Thus, while a considerable effort was made to obtain most recent secondary data and to gather primary information, it is necessary to recognize that this was not always successful given the appalling quality or sheer absence of data.

This agricultural assessment was prepared by the Inter-American Institute for Cooperation on Agriculture (IICA), through its Center for Programs and Investment Projects (CEPPI), in collaboration with the IICA Office in Haiti. It was elaborated at the request of the International Fund for Agricultural Development (IFAD), which also provided the financial support.

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ACRONYMS

ACDI	Canadian International Development Agency
ADRA	Adventist Development and Relief Agency
AID	Agency for International Development
APA	Association of Agricultural Producers
BCA	Bureau de Credit Agricole (Agricultural Credit Bureau)
BNDAI	Banque Nationale de Developpement Agricole et Industriel (National Bank for Agricultural and Industrial Development)
BRH	Central Bank of Haiti
CADCO	Coffee Coordination Committee
CARE	Cooperative for American Relief Everywhere
CARICE	Small Village in the Center of Haiti
CBP	Pignon Goodwill Committee
CCFC	Conference for Caribbean Food Crops
CECI	Center for International Studies and Cooperation
CIDA	Canadian International Development Agency
CIMMYT	International Maize and Wheat Improvement Center (Mexico)
CPI	Consumer Price Index
CRDA	Center for Research and Agricultural Documentation
CRS	Catholic Relief Services
CRWC	Christian Reformed World Relief Committee
DRI'S	Integrated Regional Development Projects
DSPP	Department of Public and Population
EEC	European Economic Community
ESF	Economic Support Fund
FAC	French Fund for Aid and Cooperation
FAMV	Faculty of Agronomy and Veterinary Medicine
FAO	Food and Agriculture Organization
FIDA	International Fund for Agricultural Development
GDP	Gross Domestic Product
GVT	Government
HAVA	Haitian Association of Voluntary Associations
IBRD	International Bank for Reconstruction and Development
IDAI	Development Institute for Agriculture and Industry
IDB	Inter-American Development Bank
IHSI	Haitian Institute of Statistics and Information
IICA	Inter-American Institute for Cooperation on Agriculture
IMF	International Monetary Fund
IMS	Internal Marketing System
MACEFP	Ministry of Planning, External Cooperation and Public Function
MARNDR	Ministry of Agriculture, Natural Resources and Rural Development
MBCH	Conservative Baptist Mission in Haiti

MBLIH	Liberated Baptist Mission Inside Haiti
MCC	Mennonite Central Committee
NARS	National System for Technology Generation and Transfer
NEW	New England and World Vision
NGOs	Non-Governmental Organizations
ODBFA	Organism for Development of the Artibonite Watershed
ODN	Organization for the Development of the North
ODPG	Organization for the Development of the Gonaives Plain
ODVA	Organisme de Developpment de Vallee de L'Artibonite
OMS	World Health Organization
OPS	Pan Americam Health Organization
PADF	Pan American Development Foundation
PDAI	Project de Developpment Agricole Integre
PICV	Project for Intensification of Food Crops
PL	Public Law
PNUD	United Nations Development Program
POCHEP	Postes Communautaires d'Hygienc et d'Eau Potable (Community Health and Drinking Water Post)
PPPV	Project for the Promotion of Food Crops Production
PREPIDA	Project of Rehabilitation of Small Irrigated Perimeters in the Plain of Arcahate
PROFAMIL	Association for the Promotion of the Haitian Family
PROMINEX	Haitian Export Promotion Board
PVO	Rural Development Officer (U.S.A.I.D.)
RDO	Rural Development Organization
SAF	Structural Adjustment Loan
STABEX	Export Stabilization Fund
UCONG	Unit for Non-Governmental Organizations
UN	United Nations
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
USA	United States of America
USAID	United States Agency for International Development
USCC	United States Catholic Conference
WHFC	World Harvest for Christ

HAITI

I. OVERVIEW OF THE COUNTRY

1.1. Location and key features

Haiti, with an area of 28,000 square kilometers, is located on the western side of the island Hispaniola; it has a population of 6.4 million (1989 figure), 73 percent of which live in rural areas. Thus, one of the distinguishing features of this nation is that it is a small, densely populated (228 inhabitants/square km.) and predominantly rural country.

Haiti is also characterized as being one of the poorest countries in the western hemisphere. According to 1984 figures, 75 percent of the population subsisted below the World Bank poverty line; there was one doctor per 7,180 inhabitants; only 20 percent of Haitian children finished primary school education; and the adult illiteracy rate was around 62 percent (1985). Calorie intake was an average of 1,902 per day in 1986, the lowest in the Americas; the infant mortality rate in 1988 was 116 per thousand live births, and life expectancy was 55 years.

1.2. Climate

The country enjoys a tropical climate with temperatures ranging from 20 °C to 29 °C in the rainy season, and reaching 35 °C in the dry season. The rainy season varies from one location to another. Nevertheless, in general, there are two rainy seasons during the year, one from March until May and the other from September to November. The country sometimes suffers severe droughts and is occasionally hit by strong hurricanes.

1.3. Topography

The country's topography is mostly mountainous and steep. Only about 15 percent of the land area is reasonably flat; 50 percent of the land has a slope greater than 40 percent and is suitable ecologically only for forest cover.

1.4. Political aspects

The recent political context prevailing in Haiti has been one of serious instability. Specifically, since February 1986, when president Jean-Claude Duvalier flew to exile in France, the country underwent five changes of president. The most recent political development following this period of constant changes was the first democratic presidential election in 33 years, which was held in December 1990. As a result of this democratic exercise, a Catholic priest, Pere Jean-Bertrand Aristide, was elected president.

As will be seen in the following sections, as a result of the political instability and certain other developments, Haiti experienced an economic recession, lost an important inflow of external financial assistance, and showed a relatively poor economic performance in the latter years of the 1980's.

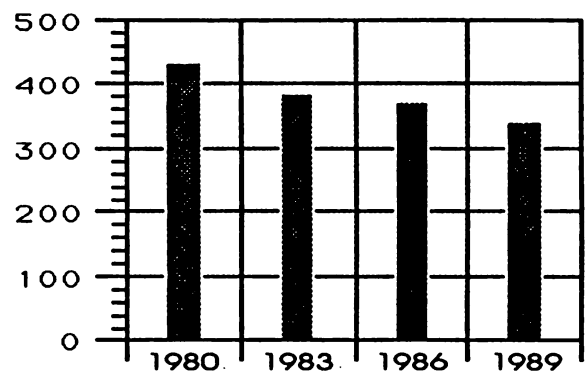
II. MACROECONOMIC PERFORMANCE

2.1. Economic growth

After enjoying sustained economic growth during the 1970s, the Haitian economy remained virtually stagnant during the last decade. Specifically, the real GDP fell sharply in the first quarter of the 1980's, showed a modest recovery during the 1983-87 period [1], and dropped sharply in 1988 and 1989. Overall, in light of the performance of the real GDP in the 1980's, the period could be described as a "lost decade", as indicated by the average annual growth rate of -0,8 percent.

[1] The real GDP grew at an average annual rate of 0.5 percent during this period.

Figure II.1
REAL PER CAPITA GDP
HAITI 1980-89 - Dollars of 1988



Source: Table A.1.

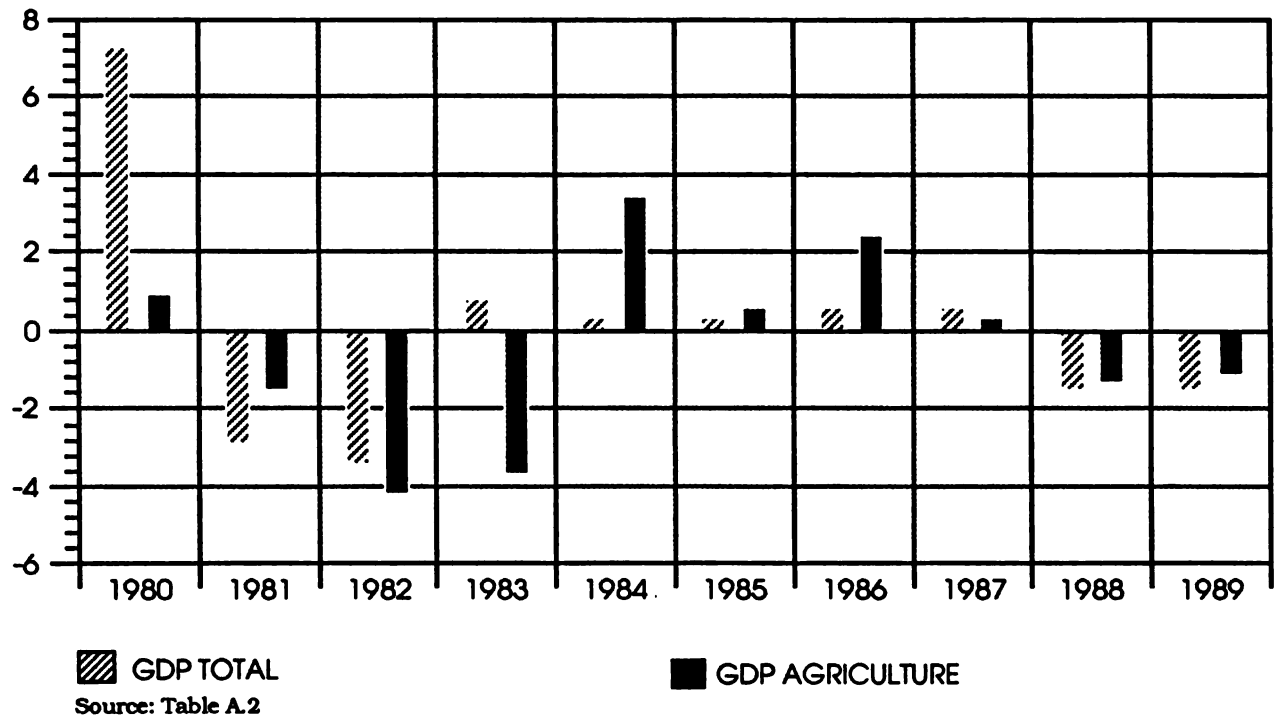
This poor economic performance, together with a relatively high population growth, resulted in a dramatic fall in real per capita income. As shown in Figure II.1, real per capita GDP dropped by 21 percent, from US$ 431 in 1980 to US$ 341 in 1989. Thus, during that period, the average standard of living deteriorated at a rate of 2,6 percent per year[2].

The stagnation of the Haitian economy in the 1980's is the result of a number of economic and political factors, including (i) world-wide recession combined with the fall in the international prices of coffee and of other basic products; (ii) weakening of the country's industrial growth; (iii) erosion of monetary and fiscal discipline; (iv) decreasing agricultural productivity, resulting mainly from the pressure of population on land and (v) political upheaval and uncertainty.

When viewed against the sectoral background, the poor economic performance of the 1980's is fairly consistent with the behavior of the agricultural sector. Specifically, agricultural growth, after showing a downward trend during 1980-82 (Figure II.2), grew moderately during the 1983-87 period. At the end of the decade, agricultural output again showed a downward trend, which tended to outweigh the positive growth observed in other sectors, thus leading to a fall in the real GDP.

[2] This performance of real per capita GDP contrasts with an average annual rate of growth of per capita income of 2.8 percent during the 1971-80 period.

Figure II.2
ANNUAL GROWTH RATES OF REAL GDP,
TOTAL & AGRICULTURE
HAITI 1980-89 - Percentage



Source: Table A.2

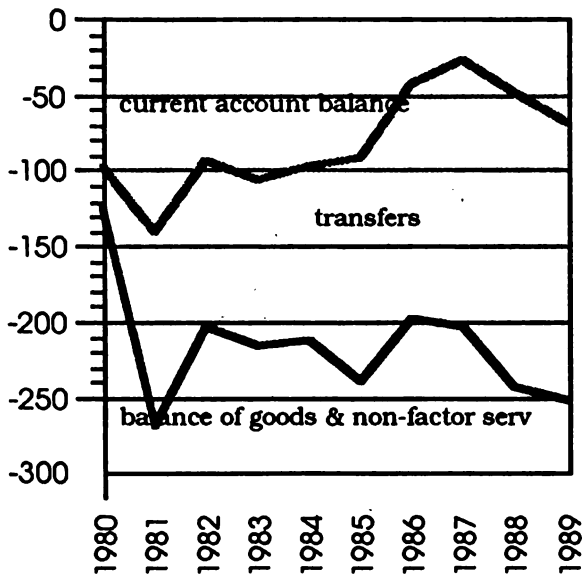
The Haitian economy experienced a change in the composition of the GDP during the 1980-89 period. The agricultural sector's share in total output remained fairly constant (Figure A.1) In contrast, the share of the commerce and manufacturing sectors fell, while financial services, construction and government services sectors increased their contribution.

2.2. Balance of payments

During the 1970s, Haiti did not face serious balance-of-payments problems. However, a new external picture emerged during the first half of the 1980's, for several reasons including: (i) a sharp rise in world interest rates; (ii) a contraction of international lending; (iii) adverse terms of trade; and (iv) erosion of fiscal and monetary discipline.

Imports of goods and non-factor services increased by almost 20 percent between 1980 and 1985. As total foreign exchange earnings from transfers and exports were insufficient to offset the growing import bill, the current account showed significant deficits of approximately US$ 95 million over the first half of the 1980's (Figure II.3). These deficits were partially financed through long-term capital received by the government (a total of US$ 244.5 million over the six years). But as the capital inflow was insufficient to cover the country's needs, Haiti suffered a net loss of US$ 134 million worth of international reserves in 1980-85, which further aggravated the deterioration of the external accounts.

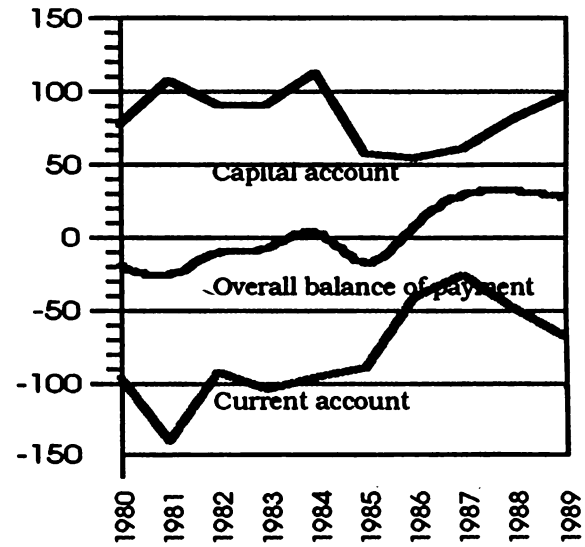
Figure II.3
CURRENT ACCOUNT BALANCE
HAITI 1980-89 - Millions of US$



Source: Table A.3

In 1986-87, the balance of payments showed a better performance (Figure II.4). The improvement resulted mainly from a sharp reduction in the current-account deficit associated initially with a drop in imports followed by an increase in exports. The major factors behind the improved external performance were a real devaluation of domestic currency (gourde) and a reduction of export taxes brought about by policy reforms.

Figure II.4
BALANCE OF PAYMENTS
HAITI 1980-89 - Millions of US$



Source: Table A.3

In 1988-89, the current-account deficit grew again, reflecting a deterioration in both the trade and the service balances. Exports of goods and non-factor services fell significantly because of an overvaluation of the gourde and a drop in tourism revenues resulting from publicity about AIDS and social unrest in the country (Figure A.2). The deterioration of the current account, however, was more than matched by an increase in the capital account associated with an IMF agreement and an increase in financing from non-governmental organizations (NGOs) for projects funded by external donors.

2.3. Foreign aid

Regarding foreign aid, commitments and disbursements to Haiti increased substantially in 1986-87 compared with 1980-85. However, due to the political and constitutional crisis in late 1987, the aid flows from

IMF, the World Bank, and USAID were cut. In the aftermath of the aborted elections of November 1987, the United States postponed implementation of the second Economic Support Fund (ESF), and cut off all but humanitarian aid. Subsequent disbursements of the IMF Structural Adjustment Fund (SAF) were also withheld beginning in November/December 1987. Specifically, a proposed US$ 67 million ESF and US$ 8 million SAF for 1988-89 were withheld.

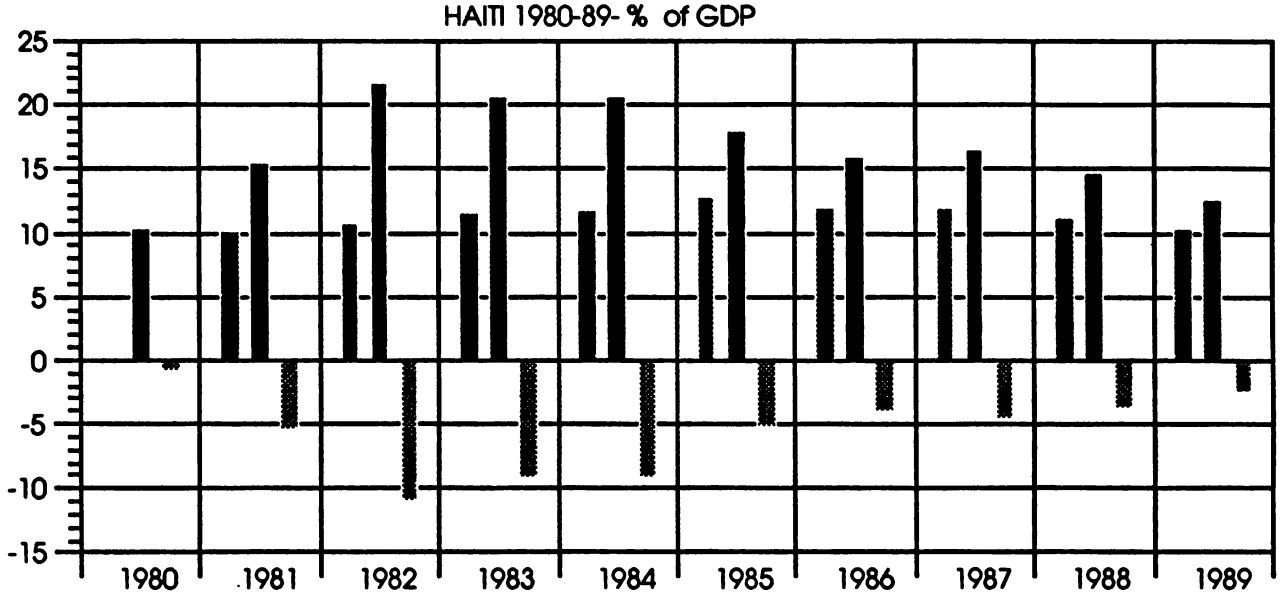
As indicated earlier, one of the impacts of the foreign assistance cut-off was an increase in financing of PVO and NGO projects by external donors.

2.4. Public finance

Historically, fiscal discipline had been one of the distinguishing features of the Haitian economy. A sound financial situation had allowed the government to maintain a relatively high ratio of public investment to total government expenditure. Specifically, while in most developing countries investment represents between 20 and 25 percent of the government's budget, in Haiti this share had been as high as 50 percent. Likewise, public savings had allowed the government to perform an important role in capital formation. The ratio of Haiti's public investment to GDP was about 10 percent, close to the average ratio for all developing countries.

Beginning in 1980, however, a different picture emerged. The financial situation deteriorated rapidly as current expenditures jumped dramatically from 18 percent of GDP in 1980 to 23 percent of GDP in 1984, as a result of a substantial increase in current transfers and subsidies. Total expenditures generally outweighed current revenues plus foreign grants, resulting in public sector deficits of approximately 6 percent of GDP in the first half of the decade. Since government revenues showed little growth relatively to current expenditures, public savings turned out to be dramatically low (Figure II.5), with the resulting negative effect on domestic capital formation. As Figure A.3 shows, the ratio of public investment to GDP fell from 12 percent in 1980-1981 to approximately 6 percent during the 1985-1989 period [3].

Figure II.5
CENTRAL GOVERNMENT CURRENT SAVINGS
HAITI 1980-89- % of GDP



Source: Table A.4 ■ REVENUES ■ EXPENDITURES ▒ SAVINGS

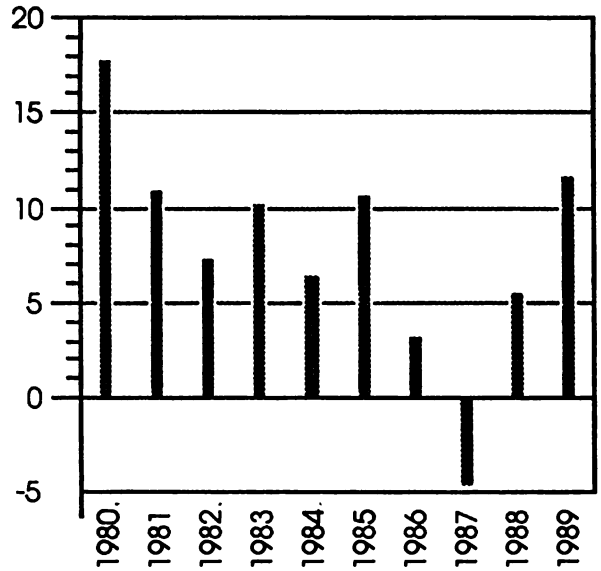
[3] The drop in public investment resulted not only from low government savings and public spending reductions, but also from the cut-off of assistance from IMF, USAID and the World Bank. The withdrawal of external lending resulted in a decrease of 23 percent in public investment financing through the Treasury. The decrease in agriculture's share of public investment during that same period was even more severe, amounting to over 50 percent.

A relative improvement of public finance was achieved during 1986-87 as a result of a number of fiscal reforms launched as part of an adjustment program (see section III.). In its efforts to stabilize the economy, the government was able not only to reduce the public sector deficit but also to increase current savings. However, the reforms did not progress after 1987; therefore, much remains to be done in order to generate the savings needed to finance the development of Haiti.

2.5. Inflation

The inflation rate (CPI) showed a cyclical behavior in the 1980's. After varying around an average annual growth rate of approximately 10.6 percent for the 1980-85 period, the rate of inflation dropped markedly in 1986 and 1987, and then moved back to the relatively high levels observed in the first half of the decade.

Figure II.6
GROWTH RATES OF CONSUMER PRICES
ANNUAL AVERAGE 1980-89 - Percentage



Source: Inter-American Development Bank, Economic and Social Progress in Latin America, 1990 Report

The inflation rates observed during the 1980-85 period were largely associated with monetary expansion to support the fiscal deficits. Specifically, while from 1967 to 1977 domestic borrowing (primarily from the Central Bank) averaged 4 percent of government expenditures, during the 1980-85 period, that average was 14 percent, 99 percent of which represented borrowing from the central monetary authority.

The relatively low inflation rates of the 1986-87 period, in turn, resulted basically from two factors: firstly, the structural adjustment program implemented by the government that replaced the Duvalier régime in 1986; and secondly, smuggled imports, which intensified when provincial ports that had formerly been closed were opened up to international traffic. With regard to the adjustment program, the liberalization of imports and reduction in excise taxes and in the prices charged by public enterprises helped significantly to lower the inflation rate in that period.

Finally, the re-emergence of relatively high rates of inflation in the late 1980's was due basically to: (i) discretionary tax and price increases decreed by the government; (ii) an upturn in international prices of imported foods and other consumer goods; (iii) a substantial growth of credit to the private sector; and (iv) financing of the public sector deficit through high-powered money.

2.6 Employment and wages

Historically, the Haitian economy has experienced an important shift in the sectoral distribution of employment towards urban activities. Specifically, in the 1970's, total labor force expanded by 75,000, reflecting an absolute decline of 96,000 in the rural areas and an increase of 171,000 in the towns. These numbers mean that approximately 9 percent of rural workers migrated to industrial and service sectors during that period.

In the early 1980's, the sectoral change in employment was aborted as economic stagnation resulted in increasing unemployment (mainly in urban areas) and in an ensuing process of labor emigration.

In 1986, the recognition of the poor economic performance and the attendant unemployment problem led the government to adopt a new policy strategy oriented towards increasing production and employment. In general terms, this policy strategy included: (i) short-term industrialization for export; (ii) development of an integrated industrial base; (iii) far-reaching reorganization of agriculture; (iv) mobilization of domestic savings; and (v) attraction of foreign investment. As a result, employment reversed the

downward trend of the early 1980's, showing moderate growth, particularly in agriculture, manufacturing and banking. This growth trend was aborted late in 1987, when social unrest and economic uncertainty brought back a decline in economic activity associated with a very high rate of unemployment (25 to 30 percent of the labor force) for the rest of the decade.

Unemployment problems were accompanied by significant losses in real wages during the 1970's. In Haiti, wages are set in a free labor market, with the government limiting its intervention through the establishment of a minimun wage. During 1980-87, real manufacturing wages accumulated a loss of 28 percent, reflecting the weakness of economic activity and hence the laxity of the labor market.

TABLE II.1. REAL MANUFACTURING WAGE

Year	Index 1980 = 100
1983	91.2
1984	79.6
1985	86.4
1986	70.4
1987	71.9

Source: Ministry of Social Affairs; IHSI.

The evolution of real minimum wages also reflects an important reduction of real incomes for the poorest segments of the working class. Indeed, minimum-wage workers benefited from the government's mimimun wage policy, which promoted an increase in real minimum wages during 1980-82. After that, however, the government kept the nominal minimum wage unchanged during two consecutive time spans, 1982-84 and 1985-87, generating a substantial reduction of real minimum wages throughout the rest of the decade.

III. RECENT ECONOMIC POLICIES

Haiti's economic policy changed significantly during the 1980's. Over this decade, policy orientation may be divided into three sub-periods: 1980-85; 1986-87 and 1988-89.

3.1. Economic deterioration: 1980-85

During 1980-85, Haiti's economy was adversely affected by poor economic policy and inefficient economic management, despite the fact that two stabilization programs, supported by stand-by arrangements with IMF, were applied in 1982 and 1984. Economic policy mismanagement followed an inward-oriented development strategy pursued by an interventionist government that had little concern for monetary and fiscal discipline.

Historically, the public sector in Haiti has played an important role in the economy through direct participation in the production of goods and services, and through the implementation of controls over private sector economic activity. During 1980-85, this orientation was maintained, as the government intervened strongly in the economy through restrictive institutions and practices, such as trade monopolies and outright closure of provincial ports, as well as through a system based on fiscal and trade régimes using a number of instruments such as heavy export taxation, excise duties, quantitative restrictions of imports and high tariffs.

The government's participation in production of goods and services also expanded with the rapid rise in public expenditure relative to GDP, in particular, to support investment promotion schemes. Under these schemes, a large share of the scarce public resources were poorly allocated to administration and unproductive investment projects (purchase or establishment of unproductive state manufacturing enterprises, such as flour and vegetable oil mills and cement and sugar factories), rather than being oriented towards increasing the country's production capacity or improving public services for the Haitian population.

The activist economic policy resulted in a growing fiscal imbalance which was financed basically by an accommodating monetary policy, external credit and generous foreign aid. Net disbursements to government from multilateral development agencies and comercial banks increased substantially, as reflected in a rise in Haiti's external debt, from US$ 320 million (22 percent of GDP) in 1980 to US$ 690 million (34 percent of GDP) in 1985. On the other

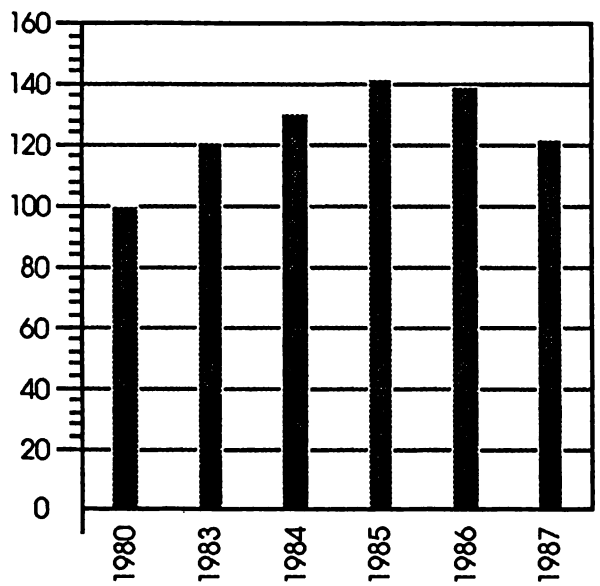
hand, the lack of a well-developed financial market, particularly the absence of a bond market, meant that the main domestic source for financing the fiscal deficit was the Central Bank. Therefore, rising financial requirements of the nonfinancial public sector were largely financed by currency issues.

The accommodating monetary policy associated with an appreciation of the exchange rate that amounted to 40 percent between 1980 and 1985 (Figure III.1), was reflected in the balance of payments, and led to a worsening of Haiti's external reserves.

Thus, while currency and demand deposits (M1) grew by 63 percent between 1980 and 1984, reserves fell by about US$ 22 million a year. Domestic credit from the banking system to the public sector also increased rapidly by almost 200 percent, leaving little room for the growth of credit to the private sector, which remained virtually unchanged during 1980 and 1984.

Because of expansionary financial policies and severe distortions in resource allocations, Haiti's economic situation deteriorated during the first half of the 1980's. Inconsistencies in economic policies weakened Haiti's productive capacity and exacerbated structural imbalances. The country experienced declining rates of economic growth, increasing external current-account deficits, a depletion of external reserves, an overvaluated exchange rate, declining domestic savings and investment, and stubborn inflation which remained at around 10 percent per year. Therefore, economic mismanagement led to an increase of external and internal imbalances and consequently to an inequitable and inefficient economy.

Figure III.1
REAL EFFECTIVE EXCHANGE RATE
HAITI 1980-87 - Index 1980=100



Increase of index denotes appreciation
Source: Ministry of Social Affairs; World Bank, International Economics Department.

3.2. Economic adjustment: 1986-87

In March 1986, the government launched a new stabilization program based on both the restoration of fiscal discipline and the liberalization of trade. This program followed a major change in the political régime associated with Duvalier's departure from Haiti and the establishment of a Provisional Government which promised structural reforms and democratic elections. In response to these economic and political initiatives, the multilateral funding agencies, particularly IMF, the World Bank and USAID, put together a financial package to facilitate the structural adjustment measures.

The stabilization program defined the policy content of fiscal reform to include the following measures: (i) reduction of public expenditure and a change in its composition, in favor of health and education; (ii) scrutiny of investment outlays to favor the ongoing projects; and (iii) tax reform oriented towards reformulating an inefficient revenue collection system, which had too many taxes, charges and fees [4].

The fiscal reform presented at least three distinguishing aspects (Table III.1). Firstly, it changed the structure of public sector receipts by placing greater reliance on tax revenues (vis-a-vis non-tax receipts) and by shifting the main burden of taxation from international trade to domestic activities,

[4] The reforms involved: (i) a reorganization of the fiscal system to centralize tax collection and eliminate earmarking; (ii) the introduction of new taxes, the most important being a value added tax; (iii) a lowering of the income tax top rate from 50 to 30 percent and a reduction of the number of tax brackets.

TABLE III.1. CENTRAL GOVERNMENT FINANCES. HAITI 1981-89

	1981	1983	1985	1987	1989
Current Revenues (1)	10.1	11.5	12.8	11.9	10.4
Tax revenues (2)	86.6	88.6	87.9	95.8	95.6
DIRECT TAXES (2)	17.2	15	13.3	11.4	14.3
- Income taxes (2)	15.6	13.7	12.1	9.9	12.4
- Property taxes (2)	1.6	1.3	1.2	1.5	1.8
INDIRECT TAXES (2)	69.4	73.6	74.6	84.4	81.3
- Production & sales taxes (2)	15.5	27.2	34	35.1	38.5
- International trade taxes (2)	37.5	37.2	23.9	17.6	17.5
Non Tax revenues (2)	13.4	11.4	12.1	4.2	4.4
Total Expenditures (1)	18.4	23.4	20.1	18.9	12.6
CURRENT EXPENDIT. (3)	83.8	88.3	89.6	87.3	102.4
- Purchase of goods & sevices(3)	33.4	27.5	38.5	44.8	69
- Interest payments (3)	3.3	3.8	n.	n.	n.
- Current transfers & subsidies (3)	47.2	51.4	51.1	42.5	33.4
CAPITAL EXPENDITURES (3)	16.2	10.2	8.7	10.8	15.2

Notes: (1) = % of GDP (2) = % of current revenues (3) = % of total expenditures
Source: Table A.4

primarily through the introduction of a value added tax.

Secondly, the effort to reduce current spending fell largely on current transfers and subsidies, while the expenditures for the purchase of goods and services, which include government salaries [5], experienced a marked increase.

Thirdly, the government also had to place emphasis on cleaning up its own house. This effort was aimed at reducing the size and improving the efficiency of the industrial public sector. Of the five industrial public enterprises, two i.e, the sugar and vegetable oil factories, were closed, and another two, i.e., the flour mill and cement factories, were restructured (technical, financial and organizational/management reorganization) to gain efficiency and competitiveness, while at the same time strengthening public sector finances.

As a result of the fiscal reform, current outlays fell substantially after 1986, while capital expenditures continued the downward trend initiated in 1980. Thus, total government expenditures turned out to be significantly lower vis-a-vis the first half of the 1980's. Therefore, the goal of reducing the public sector deficit was fairly well achieved.

When the stabilization program was introduced, the authorities also liberalized the external trade régime, in order to stimulate competitive efficiency and reduce inequalities in income distribution. Quantitative restrictions on imports were eliminated for 94 percent of all goods. Specific import tariffs were also replaced by an ad valorem tax, and export taxes on important agricultural products, such as coffee, cocoa and sisal were eliminated. Finally, the exchange rate depreciated by about 14 percent compared to the appreciation of 40 percent which occurred between 1980 and 1985. As a general result of the liberalization package, the level of protection of the Haitian economy was substantially reduced, with a view both to lowering prices and to improving resource allocation.

[5] In 1988, nearly 80 percent of government recurrent expenditures were devoted to salaries, leaving little for supplies, materials and equipment necessary for the public employees and infrastructure to function effectively (World Bank, Report Nº 7469 - HA).

The immediate response of the economy to the change in policy orientation was favorable. The most impressive results were in terms of inflation, public deficit and external current account. After the introduction of these measures, the rate of inflation fell to 2 percent per year compared with an average of 9 percent in 1980-84; the public deficit was brought down to 6 percent of GDP compared with 9 percent in 1980-85, and the external current-account deficit dropped to 5 percent of GDP compared with 8 percent in 1980-85.

3.3. Loss of economic achievements: 1988-89

When the reforms initiated in 1986 still needed to be consolidated, a number of exogenous events and political crises endangered the stabilization effort and made the adjustment task more difficult. The outbreak of civil disturbances became a major obstacle to successful economic performance. The bitterness of the political conflicts almost surely reflected the extreme inequalities throughout Haitian society. Meanwhile, the economic reforms, combined with the political changes, also endangered social stability to the extent that it eliminated regulatory privileges obtained at the expense of the overall public goods.

Excessive economic regulation and protection during the authoritarian régime were responsible for giving rise to a self-perpetuating system of extra-market privileges which benefited certain social groups. The elimination of these privileges, associated with the natural impact of the reforms on economic activity and income distribution at the social and sectoral levels, led to serious political problems which contributed to the disruption of the fregile adjustment process implemented by the provisional government.

External support was also suspended after the aborted presidential election of November, 1987. The withdrawal of external support by IMF, the World Bank and USAID, which was of vital importance as a source of public financing, made the fragile economic situation still more complicated. Monetary expansion had to be used once again to cover an increasing fiscal deficit resulting from shortfalls in public revenues,a gradual loss of control over expenditures and the slow process of restructuring public enterprises.

TABLE III.2 . PUBLIC DEFICIT FINANCING HAITI 1983-89 - (% of GDP)

	1983	1985	1987	1989
1. Overall deficit	-4	-2.2	-1.8	-2.1
2. Borrowing				
domestic	1.6	1.8	0.5	1.7
foreing	1.9	0.3	1.2	0.4

Source: Table A.4.

As a result of these difficulties, Haiti again experienced deteriorating economic performance at the end of the 1980's. Real per capita GDP accummulated a reduction of more than 6.5 percent in 1988-89. The overall consumer prices jumped from -4.7 percent in 1987 to 11.7 percent in 1989. At the same time, the balance-of-payments position deteriorated, as exports declined, in part reflecting the impact of a real appreciation of the currency relative to 1986-87.

IV. AGRICULTURAL POLICIES

4.1. Trade and pricing policies

Haiti has an open economy (both imports and exports of goods represent approximately 65 percent of GDP) in which the agricultural sector plays an important role in terms of trade-balance and foreign-exchange earnings.

Despite the above, the need to raise revenues led the government to use excise taxes and taxes on international trade as its major instruments of policy intervention in the agricultural sector. Therefore, the 1980-86 structure of agricultural trade policy included: (i) import duties on commodities such as rice, maize, sorghum, wheat flour and sugar; (ii) export taxes on coffee, cocoa, sisal, cotton and essential oils; and (iii) excise taxes on sugar and wheat flour. The government also had a monopoly on imports of sugar, wheat and flour, regulated the domestic prices of these products, and closed provincial ports to international trade.

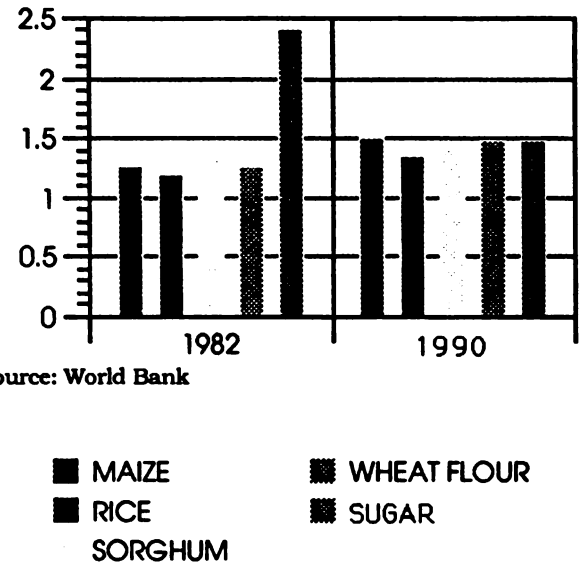
The implementation of these policies introduced an anti-export bias, subsidizing the domestic production of goods that competed with imports at the expense of exportables. Specifically, while domestic producers of exportables were receiving farmgate prices that were about half of the border-equivalent prices, the producers of domestically grown items received prices that were above world market levels. This price distortion, however, did not exert a significant impact on the cash incomes of producers of domestically grown items, since their plots and productivity were too small and could not be increased[6].

The government changed its interventionist trade and pricing policies as part of the policy reforms initiated in February, 1986. Given the objetives of correcting price distortions and improving resource allocation, the general orientation consisted of liberalizing the international trade régime and breaking up local trade monopolies.

With the exception of the elimination of export taxes, however, the 1986-89 agricultural trade and pricing policies did not support the above objectives. Specifically, while an overall tariff reform reduced the country's average tariff level from 40 to 20 percent, a number of major agricultural products received special protection through import tariffs and licenses. These policy measures resulted in production subsidies to domestic producers of corn, rice, sorghum, flour and sugar (Figure IV.1). Moreover, they tended to encourage smuggling by raising the domestic prices of protected products above the corresponding border prices.

The objectives of reducing price distortions and improving resource allocation were further hampered by the government's decision to: (i) regulate the domestic price of sugar in conjunction with the mills; (ii) transfer to the mills the exclusive monopoly of raw sugar imports and over 50 percent of the refined sugar import permits; and (iii)

Figure IV.1
NOMINAL PROTECTION COEFFICIENT
OF SELECTED PRODUCTS -1982 /1990
(ratio of domestic to border prices)



Source: World Bank

requiring exporters to surrender 40 percent of their foreign exchange at the official rate instead of the parallel rate. The implementation of these policies distorted the domestic prices of sugar, reallocated sugar rents among market participants at the expense of consumers, and resulted in an export tax of 13 percent due to a 50 percent overvaluation of the official exchange rate vis-a-vis the parallel rate.

In summary, the agricultural and pricing policies of the 1986-89 period did not improve the incentives structure of the sector. Moreover, they hurt domestic consumers (through higher prices), the government (as the economic rents generated by import constraints went to the hands of the sugar industry), and agricultural exporters (as a consequence of the 50 percent surrendering requirement for foreign exchange earnings of exporters).

4.2. Credit

The key feature of the Haitian agricultural credit policy has been the lack of access that local farmers traditionally have had to the formal credit market. This limiting factor to agricultural development has resulted from the fact that the number of specialized

[6] The major problems associated with plot size and productivity were: (i) the pressure of population on the country's cultivated land; (ii) the use of backward cultivation practices; (iii) a vicious long-term cycle of deforestation and soil erosion which intensified further the land shortage; and (iv) ocassional targeting of public agricultural investment and credit programs to social relief rather than to stimulating growth in productivity and soil conservation.

government institutions which channel direct credit to agriculture has decreased over the years. The last of these institutions were the Banque nationale de développement agricole et industriel (BNDAI) (National Agricultural Development Bank), which was closed down in 1989, and the Bureau de crédit agricole (BCA) (Agricultural Credit Bureau), which remains open. New BCA lending, however, has dropped steadily after peaking in 1984.

Moreover, the commercial banking sector has played an extremely limited role in the financing of Haiti's agricultural development. In mid-1988, for example, only 0.8 percent of total outstanding credit from banking institutions was channelled to agriculture (World Bank, February, 1991).

As a response to their limited access to the formal credit market, a number of communities in rural Haiti have established credit unions (caisses populaires) to meet their need for financial services. Credit is extended to producer groups and individual farmers. Though still a minor part of financial activity in this market, credit extended by rural credit unions has played a significant role in several regions, by filling the void left by the loss of donor support for agricultural credit funds in BCA and BNDAI [7].

While several credit unions have been operating for as long as twenty years, the movement is developing and has recently undergone a rapid expansion, as a result of the growing gap in rural financial services. Given the continuing difficult economic and political environment in which they operate, the growth of credit unions and their gradual move into production credit have provided a viable alternative in a country where the vast economically active population remains in the informal sector, with no financial infrastructure to support production activities.

In the absence of other financial services, credit unions in Haiti have begun to build an independent informal financial system which could form a link with the banking sector in a more efficient rural financial market. In 1990, an estimated 50 to 60 percent of the savings base in larger credit unions was placed with banks. Rural credit unions appear to have succeeded in mobilizing significant levels of savings, and in providing credit in a flexible way, and in a form which is for the most part well adapted to the needs and the capability of rural borrowers to use financial services. The majority of credit unions are lending at 1 percent/month or 12 percent per annum an interest rate which does not cover costs of rural credit extension and servicing in today's market. They also offer savings facilties at low or no interest, restrinting their capacity to moblize financial savings.

At the same time, rural credit unions demonstrate significant management weakenesses. They are typically not carrying out a full accounting cycle, including derivation of basic financial ratios indicating portfolio performance, overdue amounts and loan recovery rates. So far, they have not achieved their full potencial as financial intermediaries in rural areas, particularly in the area of production credit.

In addition to credit unions, the agricultural producers have relied extensively on many other modalities of informal credit to finance their needs [8]. The problem with these loans, however, is that the real interest rates are quite high. Given this aspect, most of the lending has financed consumption rather than investments in the adoption of new technologies, since the returns on such investments have not justified paying the interest rates prevailing in the informal sector. Finally, one should note that as most of the rural credit is provided through informal channels there is a lack of information to analyze the impact of macroeconomic and sectoral policies on the financial services to farmers.

7 According to 1990 figures of the Conseil national de cooperatives, more than 70 credit unions are operational in Haiti serving both urban and rural areas. They represent a total of more than 60,000 members, and are operated by an estimated 300 credit union directors and members of Credit and surveillance committes.

In addition to this minuscule direct lending, the agricultural sector has benefited somewhat from commercial lendings to agroindustrial firms (e.g. tomato paste, essential oils, sugar cane distilleries and coffee processing plants) which extend credit to farmers. Due to the unavailability of data, however, there is no estimate of the magnitude of this indirect lending.

[8] The major modalities of informal credit in rural Haiti have been: advance sale crops, retailer credit, input credit, loans from friends and family, ordinary moneylenders, and loans from wholesale buyers crops.

4.3. Marketing

Food production in rural areas is the object of intense marketing activity, although a high percentage of production (e.g., 90 percent of sorghum, 50 percent of corn) is consumed locally. The marketing system for food products is based on a rural-urban-rural circuit which is unique as far as its agents and products are concerned.

Products are circulated through a network of markets, known as carrefours. Local and rural markets for producers and consumers constitute the first level. At the regional level are the semi-rural and regional markets for farmer-marketing agents and retailers or their agents, known as Madame Sara. These also function at the national or provincial levels. The Madame Sara plays a very special role in the process by buying and transporting the products to urban markets, which have warehouses and certain preservation facilities. Urban retailers purchase in these markets to sell in places far away from the city or in remote regions.

In open markets such as these, where there are numerous agents (farmers, intermediaries and consumers), prices are established freely through bargaining. Nevertheless, the demand represented by the intermediaries contains a degree of speculation, since their agents are better informed than the farmers who have to deal with the precarious state of the infrastructure, transportation and communications of the country.

The farmers receive approximately 60 to 75 percent of the consumer price. The mark-up for wholesalers is between 15 and 30 percent, with the remaining 10 percent going to warehouse owners and retailers.

There is practically no State intervention in markets for basic foodstuffs. Price policies apply mostly to import or export commodities, such as sugar, cotton, flour, coffee and cocoa. Occasionally, partial price controls are applied to milk, coal, oil and gasoline.

The consumer price index of basic foodstuffs showed an upward trend during the 1980-85 period, increasing by approximately 44 percent. In 1986-87, however, this trend was temporarily reverted as a result of the economic reforms introduced earlier in that period.

4.4. Land tenure

The State is Haiti's largest single landowner. As Table IV.1 shows, in 1989, the State owned approximately 35,000 farms representing 6.1 percent of total farms and 11.1 percent of the country's arable land.

The government of Haiti adopted a conservative position regarding its land policy in the 1980's, maintaining almost unaltered its previous policy of promoting little or no structural change in the land sector. This fact, together with the rapid increase in population growth, intensified the land fragmentation process, resulting in relatively smaller average plot size. In Foscave and Les Anglais, for instance, the average plot size fell to 0.14 and 0.47 ha, respectively, which is quite small compared to a weighted average plot size of 0.75 ha[9] .

As an integral part of its policies during the 1980's, the government continued to lease public lands to individuals who either farmed the land themselves or subleased it. Nevertheless, since lease fees were not adjusted, lease revenues dropped markedly relative to total fiscal earnings.

The land titling system is disorganized and only a small amount of titled land complied with all the requirements of the legal framework. Among others, the basic reasons behind the lack of compliance with the legal framework are the relatively high cost of formal titling [10], and the farmers' perception that formal titled land is not entirely secure and risk-free.

Compliance with legal requirements has been replaced by an informal system characterized by partial compliance with the law (land purchasers usually have some notarized document to prove ownership).

[9] This weighted plot size includes the following departments: North, North West, Artibonite, West, and South. The smallest average plot size among those departments was 0.55 ha.

[10] The estimated cost of formal titling varies between 15 and 30 percent of the property value (World Bank, Haiti: Agricultural Sector Review, February, 1991).

TABLE IV.1 STATE-OWNED LAND, HAITI - 1989

Department	Number of Landholdings		Size in Hectares	
	State	% of total	State	% of total
ARTIBONITE	5,578	5.0	13,142	4.8
CENTER	3,341	n.a.	16,997	n.a.
GREAT ANSE	4,257	4.8	13.776	9.2
NORTH	2,363	3.6	4,728	5.0
NORTH EAST	4,190	12.6	28,149	49.4
NORTH WEST	2,391	5.4	4,827	5.7
WEST	2,717	n.a.	25,570	n.a.
SOUTH	2,612	3.9	6,224	6.6
SOUTH EAST	7,507	12.1	24,473	24.3
TOTAL	**34,956**	**6.1 a/**	**137,886**	**11.1 a/**

a/ Based on the 7 Departments for which all information is available; does not include the Center and West Departments.
Source: BREDA and IRAM "Étude des possibilités d'augmentation du loyer des terres rurales de l'État", 1989.

The existence of informal land titling, however, did not constitute an impediment to an active land market.

In addition to the above aspects, Haiti's land policy has contributed significantly to the chronic process of land erosion. This is due to the fact that the ensuing land ownership pattern (more than 40 percent of land parcels are farmed under sharecropping or rent arrangements) has led farmers to grow annual crops instead of trees which prevent erosion problems.

V. RECENT EVOLUTION OF THE AGRICULTURAL SECTOR

5.1 Characteristics of the sector

Haiti is divided into nine Departments which for statistical purposes are frequently aggregated into four regions, North, Transversale, West and South (Figure V.1). Agricultural production takes place in each of these regions. According to the latest statistical information available, in 1985 approximately 46 percent of the land occupied was devoted to agricultural production while agro-pastoral and silvo-pastoral activities accounted for roughly 33 and 20 percent, respectively.

As Table V.1 shows, except in the South region where the silvo-pastoral activity is the second most important with respect to land occupation and use, in all other regions agricultural production is the most significant in terms of land utilization followed by agro-pastoral activity. The Transversale region is distinguished among the four regions for accounting for the largest share of land occupation in agricultural (37 percent), agro-pastoral (48 percent) and silvo-pastoral (26 percent) activities.

With respect to the geographical distribution of specialized crops, rice has been grown predominantly in the Transversale region, while the North and West regions have been distinguished for growing most of the country's sugar-cane (Table A.5). The North is also the most important region for sisal production.

The Haitian agricultural sector is characterized by its leading position in the country's economy, by its low productivity, by showing a high population density (617 inhabitants per sqare kilometers of cultivated land in the early eighties), and by the predominance of small farms. Agriculture accounted for 33 percent of GDP in 1989,

FIGURE V.1

Departments of Haití

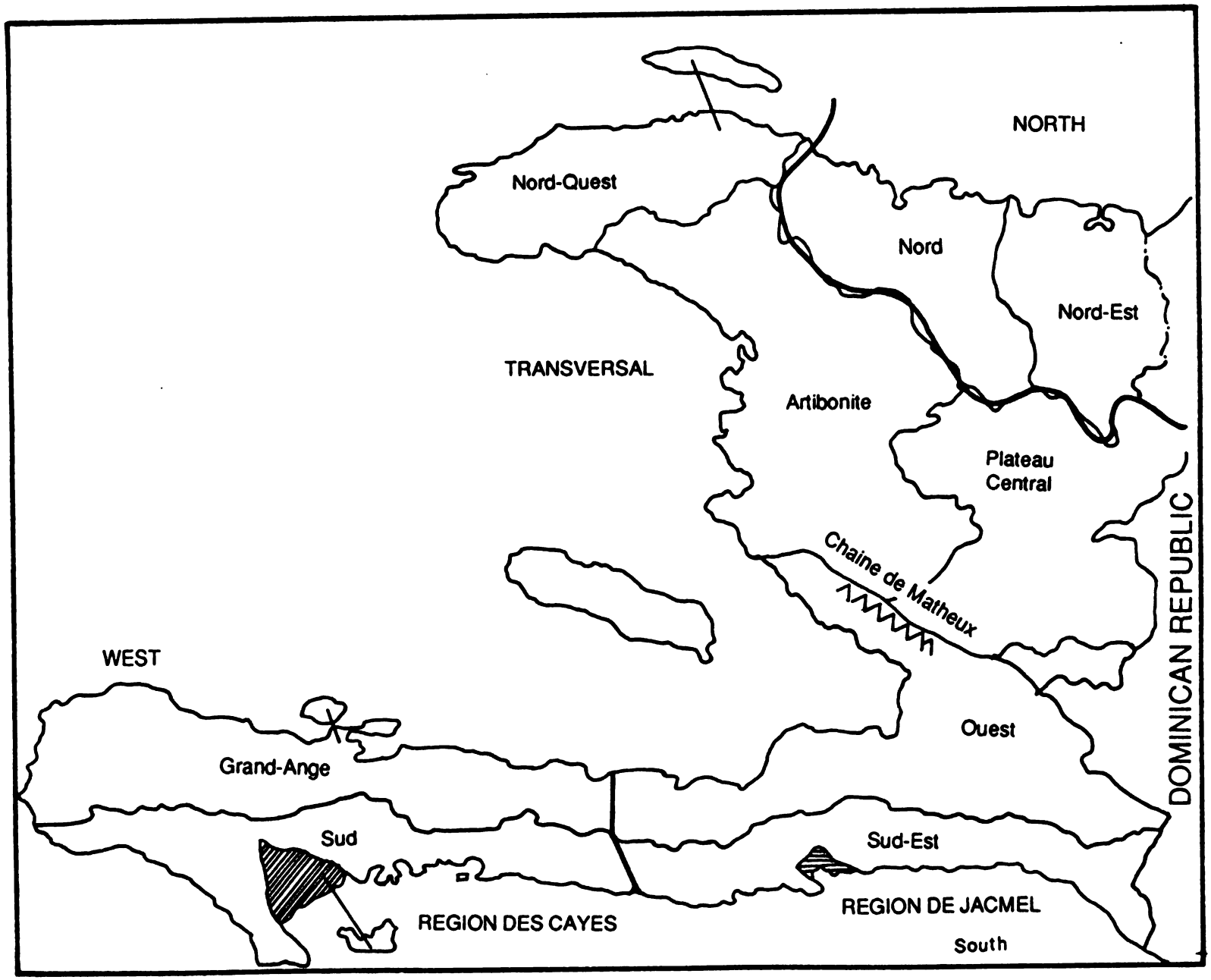


TABLE V.1. HAITI, OCCUPATION OF LAND IN RELATIONSHIP TO TOPOGRAPHY, 1985 (Has.)

REGION	VALLEYS & PLAINS	LOW HILLS MOUNTAINS	MOUNTAINS	PLATEU	TOTAL
NORTH					
AGRICULTURAL DOMAIN	91,882	77,506	38,142	3,020	207,530
AGRO-PASTORAL DOMAIN	6,849	37,269	49,880	290	94,288
SILVO-PASTORAL DOMAIN	10,262	30,694	31,508	0	72,464
SUBTOTAL	108,993	145,469	119,530	290	374,282
TRANSVERSAL					
AGRICULTURAL DOMAIN	159,696	195,638	87,162	9,044	451,540
AGRO-PASTORAL DOMAIN	37,375	192,674	168,668	24,543	423,260
SILVO-PASTORAL DOMAIN	9,427	82,433	26,980	18,036	136,876
SUBTOTAL	206,498	470,745	282,810	51,623	1,011,676
WEST					
AGRICULTURAL DOMAIN	63,747	78,899	110,223	30,841	283,710
AGRO-PASTORAL DOMAIN	10,470	111,151	100,263	16,751	238,635
SILVO-PASTORAL DOMAIN	6,322	86,789	26,024	23,568	142,703
SUBTOTAL	80,539	276,839	236,510	71,160	665,048
SOUTH					
AGRICULTURAL DOMAIN	91,882	142,919	27,689	12,129	274,619
AGRO-PASTORAL DOMAIN	6,849	71,709	40,150	4,120	122,828
SILVO-PASTORAL DOMAIN	10,262	96,472	64,581	9,291	180,606
SUBTOTAL	108,993	311,100	132,420	25,540	578,053
TOTALS					
AGRICULTURAL DOMAIN	407,207	494,962	263,216	52,014	1,217,399
AGRO-PASTORAL DOMAIN	61,543	412,803	358,961	45,704	879,011
SILVO-PASTORAL DOMAIN	36,273	296,388	149,093	50,895	532,649
TOTAL HAITI	505,023	1,204,153	771,270	148,613	2,629,059

Source: USAID, Haiti: Agriculture Sector Assessment, Nov. 1987.

generated about 29 percent of goods exported (1988 figure), affected 75 percent of the 6.4 million inhabitants and provided 65 percent of total employment.

Crop yields and production are relatively low due to the use of traditional production technologies. Haitian farmers work predominantly with hoes and machetes using few or no improved inputs. In many areas improved technical packages for production of basic food and cash crops are not available. In others, technical packages have often been introduced before being feasibly adapted to local production conditions.

The possibilities for increasing productivity are limited by small farm sizes, mountainous terrain, poor irrigation and access roads. Additional contributory factors are weak support services in agricultural extension, input supply, marketing and distribution of agricultural products. The average smallholder who has been assisted in adapting to the use of improved inputs and production techniques, does not enjoy consistent access to the full quantity of inputs needed, due to shortages of foreign exchange and inadequate distribution systems. Lack of water is a continuing problem in some areas, even those served with donor financed rehabilitated irrigation systems.

The rural population of Haiti in 1989 was 4,676 thousand inhabitants with an average annual growth rate of 1.3 percent in

the 1981-89 period. This population density has exerted an extraordinary pressure on an insufficient supply of arable land. As a result, in the early 1980's approximately 43 percent of Haiti's land area was cultivated while only 11.3 percent is suitable for agriculture (Table V.2). Among other things, this fact has implied a dramatic environmental degradation and has accentuated the sector's characteristic of being formed predominantly by small landholdings. According to the World Bank, in 1989, farms under 4 hectares accounted for approximately 75 percent of the cultivated land.

constant resulting in a decrease in per capita production.

Traditionally, Haiti's principal crops have been corn, sorghum, coffee, beans, rice, bananas, mangoes, pigeon peas, cassava, sweet potatoes and sugar-cane. Despite a few favorable long-term trends (sweet potatoes, beans and bananas), the production of most of these commodities has been stagnant or even declining. Corn and sorghum production, for example, have been declining compared to the 1950's. An exception to this picture is rice production which

TABLE V.2. AGRICULTURAL LAND USE SUITABILITY - 1985

POTENTIAL USE	LAND AREA / (Ha)	PERCENT DISTRIBUTION
I. GOOD SOILS, FEW RESTRICTIONS ON USE. USDA CLASS I AND II.	305,450	11.3
II. GOOD SOILS, SOME RESTRICTIONS DUE TO EROSION AND TOPOGRAPHY, APPROPIATE FOR PASTURE AND FOREST. REQUIRES EXTRA SOIL CONSERVATION MEASURES IF CROPPED. USDA CLASS III, IV, AND VI.	857,180	31.7
III. MEDIOCRE, SWAMPY, POORLY DRAINED, SUITABLE FOR RICE WITH DRAINAGE AND/OR IRRIGATION. USDA CLASS V.	63,600	2.3
IV. SOILS SUITED TO FORESTRY, TREE CROPS AND PASTURE. STEEP SLOPES, SEVERE POTENTIAL EROSION. USDA CLASS VII AND VIII.	141,860	54.7
TOTALS /	**1,368,090**	**100.0**

Source:: USAID, Haiti: Agriculture Sector Assessment, Nov. 1987.

5.2 Sector output

5.2.1 Crop production [11]

Crop production has presented a stagnant picture in the last forty years. Most food crop production has remained relatively

has more than doubled as a result of irrigation. Table V.3 shows the production of the major agricultural commodities in the 1980-88 period.

In view of the increasing food deficit, the volume of cereal imports grew rapidly. Thus, the value of agricultural imports expanded almost 400 percent in the last two decades. Agricultural exports have also showed a poor contribution to export growth with a declining share in total export value. Coffee, which is the main export crop, has reduced its contribution to the value of total exports to a half in the last two decades.

[11] Statistical information on total area and production for the main crops in Haiti es very imprecise. The estimatives available are not up-to-date and some analysts consider that most of the data is understated (Table A.6). This situation derives from: (i) the absence of mapping for the majority of areas; (ii) most of the products are grown under the intercropping system which makes it difficult to measure the cultivated area (iii) the large number of dispersed small farmers; (iv) the high level of home-consumption; and (v) the cultivated area for each crop varies within the same year and from year to year.

TABLE V.3
HAITI - PRODUCTION OF MAJOR AGRICULTURAL COMMODITIES, 1980-88
(In '000 of m tons)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
FOOD COMMODITIES									
Rice	124	120	116	113	122	124	129	124	121
Corn	186	179	176	171	186	186	196	206	205
Sorghum	125	121	118	107	118	121	119	135	136
Beans	53	51	50	47	47	48	48	49	55
EXPORT COMMODITIES									
Cofee	43	33	32	36	37	37	38	30	38
Sugar-cane	5,641	5,443	5,440	5,674	5,700	5,727	5,772	4,543	5,460
Cotton	5.9	5.7	5.4	6.6	6.6	n.a.	n.a.	n.a.	n.a.
Cocoa	3.4	2.2	4.5	4.6	4.7	5.1	5.6	5.2	3.0

Source: MARDNR.

Observations throughout the country have indicated that continued deterioration of the agricultural sector is the result of a number of factors including: (i) political upheaval and uncertainty; (ii) agricultural policy instability; (iii) lack of leadership capacity of the public sector, particularly in research and technology transfer; (iv) lack of entrepreneurial capacity; (v) absence of legislation to reinforce the security of ownership rights, in particular, for small farmers; (vi) damage caused by erosion and continued loss of soil productivity; and (vii) impoverishment of the existing irrigation system.

During the 1981-90 period, the performance of the agricultural sector has shown itself to be mostly stagnant and indeed discouraging. Specifically, agricultural production fell sharply in the first quarter of the 1980's, grew moderately during 1983-87 and dropped sharply in 1988-89. This negative performance is greatly associated with the macroeconomic policy instability. In particular, the policy reforms introduced in 1986 have been seen to be prejudicial to production of the majority food products, such as rice, corn, sugar-cane and sorghum. Other export crops such as cocoa, essential oil crops and sisal, have been stagnant causing serious distortions in the resource allocation and in the welfare of small farmers.

The trade reform included in the 1986-87 stabilization plan was committed to align the locally produced food prices with world prices. Nevertheless, it introduced an anti-export bias, subsidizing the domestic production. A number of major agricultural crops received special protection through import tariffs and licenses. The imports of basic goods was submitted to control rules and licenses. This set of protections discouraged export crops and at the same time, tended to encourage the smuggling in of food products such as corn, rice, sorghum and sugar by raising the domestic prices of food products such as corn, rice, sorghum and sugar by raising the domestic prices of protected products above the corresponding border prices.

Coffee

Coffee is now the most important commodity exported by Haiti. It is responsible for approximately 50 percent of the total value of agricultural exports (Table V.4) and provides direct and indirect employment to nearly 2.4 million people in its production process. The coffee area has remained fairly stable (around 135,000 hectares) with an annual production of 35,000 metric tons. The crop is grown by 250,000 farmers with a very low productivity level. In

TABLE V.4. HAITI - VOLUME, UNIT PRICE AND VALUES OF EXPORTS OF MAJOR AGRICULTURAL PRODUCTS, 1970-89

(Volume in '000 m tons; unit price in '000 US$/m tons; value in US$ million)

	1970	1978	1980	1982	1984	1986	1988	1989
COFFEE								
Volume	16.19	19.14	25.00	14.60	23.40	16.60	14.30	13.60
Unit Price	0.94	1.95	3.64	2.46	1.96	3.47	2.27	2.54
Value	15.20	62.30	90.90	35.90	45.80	57.50	32.50	34.70
COCOA								
Volume	1.07	2.70	2.30	1.50	3.60	2.80	2.70	2.80
Unit Price	0.63	2.56	1.96	1.47	1.25	1.79	1.48	1.06
Value	1.07	6.00	4.50	2.20	4.50	5.00	4.00	3.00
ESSENTIAL OILS								
Volume	0.21	0.30	0.20	0.20	0.20	0.20	0.10	0.10
Unit Price	12.41	31.14	27.00	28.50	28.00	21.50	32.00	36.00
Value	2.66	9.40	5.40	5.70	5.60	4.30	3.20	3.60
SUGAR								
Volume	18.03	5.30	19.20	n.a.	15.20	11.00	7.10	6.90
Unit Price	0.16	0.44	0.33	n.a.	0.42	0.37	0.41	0.42
Value	2.84	2.30	6.40	n.a.	6.40	4.10	2.90	2.90
SISAL								
Volume	16.67	4.20	3.30	2.50	0.00	1.40	6.70	6.50
Unit Price	0.11	0.39	0.42	0.68	n.a.	0.57	0.66	0.77
Value	1.83	1.60	1.40	1.70	0.00	0.80	4.40	5.00

Source: Haitian Customs Yearbook, BRH and IMF.

the last decade, the annual average yield of coffee production was 300 kilograms per hectare which is quite low compared to international standards.

Coffee production has been facing a number of problems. The crop is mostly grown in high altitudes (300 to 1,000 meters) in the North, Center and South zones which have low fertility because of the poor quality of the soils and erosion problems. In these montainous areas, the physical environment has been deteriorating due to continued deforestation which in turn has affected both the climate and the ecology. Crop management is inadequate and farmers have received little credit support. There is a limited service of research and extension which reflected in a low technological level of coffee production. The crop has also been substantially affected by Leaf Rust disease.

In 1987, the export tax on coffee was eliminated with the goal of allowing higher profits to producers. This trade policy change was expected to stimulate an increase in coffee production. However, this happened only partially. This is because, on the one hand, there was an implicit tax as a consequence of the requirement that 40 percent of export revenues should be exchanged into Gourdies at the official exchange rate instead of at the market rate. On the other hand, it seems that coffee exports operate as oligopolists retaining at least part of the benefit of the domestic price increase. Finally, export prices declined approximately 8 percent between 1987-89 offsetting part of the benefit accruing from the tax elimination.

Facing this set of difficulties, coffee producers have opted to partially diversify their activities, or to sell to buyers from the Dominican Republic or for local consumption, which in 1988 exceeded the quantity exported. As a response to this critical situ-

ation, the Interamerican Institute for Cooperation on Agriculture (IICA) initiated a rehabilitation project with the support of USAID (IICA-USAID Coffee Project). The Coffee Coordination Committee(CADCO), organized by IICA in association with USAID, has a file on the main problems faced by coffee producers.

Sugar

Sugar production was kept at fairly stable levels during the 1980's, however, exports declined drastically from 1984 to the end of the decade. Reflecting such decline, the three major sugar mills in the country,which used to process around 85,000 tons a year up to 1980, today have difficulty processing 30,000 tons, a figure that represents less than 30 percent of total domestic consumption. In 1988, to make up for shortages in domestic supplies, the government transferred the monopoly in importing refined sugar from itself to the mills. Although more than 25 percent of local consumption needs are satisfied by contraband, this does not affect the mills' monopoly.

The figures in Table V.4 show clearly that sugar exports have declined sharply. This has contributed to an increase in production of "clairin", a kind of artisan alcohol produced by small distilleries. Regarding sugar-cane, it should be mentioned that there exists no research or extension services in Haiti which could bringabout improvements in cultivation methods and yields.

Corn

Corn is one of the most important crops in Haiti, since it is an indispensable staple food for the population. Total corn production has been kept at approximately 200,000 tons a year. Cultivation methods have improved very little in the past ten years, with farmers continuing to plant poor-quality seeds in eroded soils throughout the country. An exception to this is the Les Cayes zone. There, a research program conducted by CIMMYT/CRDA, with support from USAID, has managed to introduce a new variety -the La Marquera 7027 - which has produced good results even under traditional cultivation methods.

Sorghum

Sorghum has established itself as one of the foodstuffs most widely consumed by low-income communities, especially in rural areas. In Haiti, sorghum consumption has increased substantially during the last twenty years, reaching a present level of 135,000 tons a year.

Total area under cultivation is thought to be around 158,000 hectares. If this estimate is correct, yields are around 0.85 tons per hectare, a very low figure. The main attempt, up to now, to improve sorghum production in the country has been carried out by the University of Texas, with support from USAID, through the introduction of the new variety M-5009. This variety was tested and has been distributed to farmers, who have got yields of 2-3 tonsper hectare, three times the national average.

Although sorghum continues to be a main component in certain USAID projects, and some NGOs promote it as a major crop, there is at present no countrywide extension program to promote and support the crop.

Other products

Besides the products discussed above, a number of other Haitian crops are worth mentioning, like beans, bananas, cocoa, mangoes and essential oils.

In spite of its importance as a source of protein for the population, bean production remained stagnant at approximately 50,000 tons a year during the last decade.

Bananas are cultivated in some 80,000 hectares, mainly in the Plaine des Cayes and in the Vall)e de Jacmel. Most of the genetic material comprises high-yield varieties.

A small production of cocoa (around 2,000 tons a year) takes place in the north of the country, as a result of some development work carried out in 1962, which has not been supported by either research or extension services.

Mangoes experienced considerable improvement during the 1980's in terms of new varieties and geographical distribution of production. As a result of this, the country is exporting some 90,000 tons a year to North American markets through well planned private sector ventures.

The production of essential oils has declined continuously in the past twenty years, and no special action has been taken to reverse this trend.

5.2.2 Livestock production

Livestock products have been mainly used for home-consumption, however, part of the production is sold in the food and breeding market. The yearly per capita consumption of the main livestock products is 4.78 Kg of meat, 7.5 Kg of milk, 0.3 Kg of pork and 26 eggs.

The production of livestock is an important complementary activity in Haiti's peasant economy. Small farmers have an average herd of 0.97 cattle, 0.41 sheep/goat, 4.55 to 13 heads of poultry, and 0.8 rabbits[12]. The development of this activity has been characterized by a low productivity due to: (i) inadequate feed quality [13]; (ii) non-existence of credit; (iii) lack of technical support; and (iv) degeneration of local breedings.

In spite of little stimulus from the government, livestock production showed some improvement in the 1980-86 period (Table V.5). The cattle and goat herds increased 34 and 41 percent, respectively. Fowl production grew 59 percent while the number of hogs declined 49 percent. The production of milk and eggs increased 34 and 59 percent, respectively. The increase in

TABLE V.5
PRODUCTION OF LIVESTOCK AND LIVESTOCK PRODUCTS IN HAITI 1976-1986
(CURRENT U.S. DOLLARS)

	1976	1978	1980	1982	1984	1986
NUMBER OF HOGS	1,100,000	900,000	375,549	0	2,000	200,000
VALUE OF PROD	11,220.000	11,880,000	9,366,192	0	0	24,000,000
NUMBER OF GOATS	1,000,000	945,221	995,000	1,000,000	1,200,000	1,400,000
VALUE OF PROD		3,600,000	4,158,972	5,572,000	7,600,000	10,000,000
NUMBER OF CATTLE	650,000	722,064	779,275	818,239	942,103	1,044,304
VALUE OF PROD	6,435,000	13,105,825	18,429,854	22,501,573	29,769,597	36,759,501
MILK RODUCTION (Kgs)	1,829,992	1,908,156	1,727,571	1,813,950	1,999,880	2,315,111
VALUE	219,599	282,487	387,588	351,906	447,973	518,585
NUMBER OF SHEEP	100,000	100,000	100,000	100,000	100,000	100,000
VALUE OF PROD	165,000	180,000	225,000	240,000	270,000	270,000
NUMBER OF FOWL	2,800,000	2,900,000	3,150,000	2,300,000	4,750,000	5,000,000
VALUE OF PROD	4,312,000	4,662,504	6,548,858	7,424,882	12,540,000	16,500,000
EGS DOZEN	3,780,000	5,377,880	5,985,000	6,270,000	9,025,000	2,500,000
VALUE OF PROD	3,383,720	4,902,306	7,061,702	8,806,251	13,283,133	17,456,353

Source: World Bank. Haiti Agricultural Sector Assessment. November 1987.

[12] The size of small farmer's herd of swine has not been defined since the eradication of the swine fever.

[13] The major sources of feed used by most farmers have been waste and dry season forage.

poultry production was primarily a result of the private sector's efforts to supply the market with substitutes for swine products after the eradication of the swine fever in the 1981-83 period [14].

Current investments in poultry production amount to US$ 22.0 million. A large part of the infrastructure and services have been concentrated in Port-au-Prince where there are four incubators with 210,000 eggs a week, and four mills to produce livestock feed. There are 1.4 million square feet of production infrastructures distributed throughout the country.

The dairy industry is composed of five plants which together can process a total of 22,400 liters of milk a day. 21 percent of this processing capacity has been supplied by imported raw material. In view of the current crisis faced by this industry, only 27 percent of its total capacity is being utilized.

5.2.3 Forestry

Haiti has experienced a strong over exploitation of her forest resources. As Figure V.2 shows, in contrast to what was observed in the past, less than 4 percent of the country's area is currently covered with trees. This dramatic deforestation resulted from clearing the forest for agricultural use and from cutting the trees for fuelwood, charcoal, and construction material [15].

According to available information, the national consumption of wood has been: (i) 5.0 million cubic meters for firewood and charcoal; (ii) 40,000 cubic meters for sawing; (iii) 50,000 cubic meters for posts; and (iv) 20,000 cubic meters for timber products. Agro-industries consume close to 60 percent of total wood production.

Given the rapid depletion of the country's forests, a number of reforestation projects have been carried out by international agencies such as USAID and World Bank. In general, these projects are implemented through NGOs that are administered under the Pan American Development Foundation (PADF) and CARE. According to the World Bank, in 1989 more than 6.9 million trees were distributed to nearly 50,000 farmers. Moreover, since 1982 approximately 40 million trees have been distributed to 200,000 farmers. In spite of the relevance of these and of other reforestation efforts, there is still much to do in order to revert the current picture.

5.2.4 Fishery

Fishery involves around 10,000 fishermen who carry out their activities in internal lakes and along the coast. However, only 3,000 of these individuals are full time fishermen. It is mostly an "artisanale" activity, characterized by the use of precarious boats and equipment, which do not allow the fishermen to go five kilometers beyond the shore. Thus, as a result of this and of the use of obsolete catch techniques, fish production has been relatively small vis-a-vis the country's imports. At the end of the eighties, the annual production of fish was approximately 5,000 metric tons while 12,000 metric tons were imported.

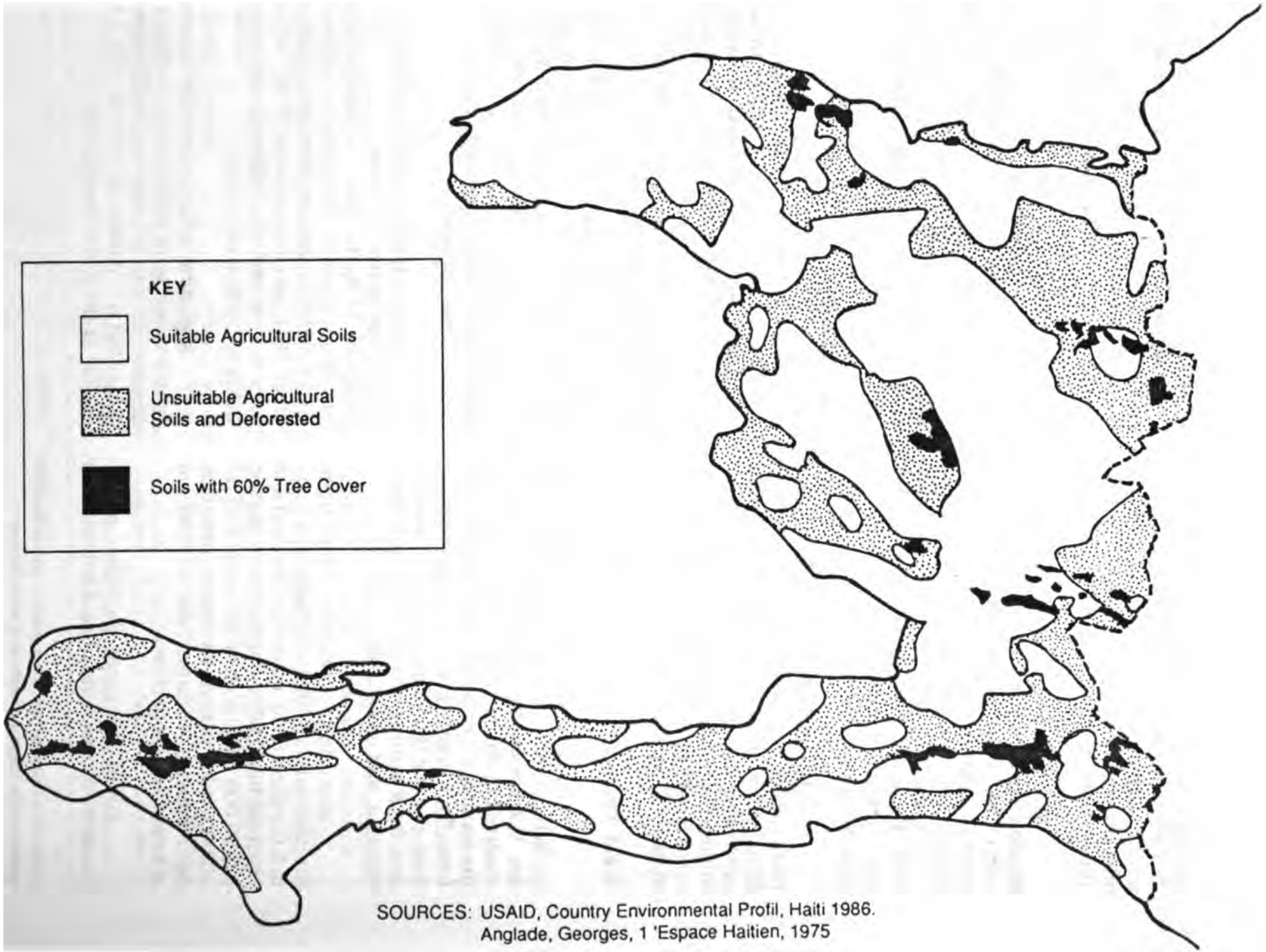
Data on Haitian lake fish catching is quite poor, except for Lake Peligre which produces 14 kg/ha/year. In spite of data limitation, however, the evidence suggests that the ichtyofaune has been over exploited since 1981, as a consequense of the swine fever control and of a reduced amount of fishes in continental waters.

Regarding fish exports only lobster have received some incentive. Nevertheless, the annual value of lobster exports dropped from US$ 3.5 million in 1982 to US$ 1.0 million at the end of the eighties.

[14] After the swine fever, the hog population lost its favorable position of the major mechanisms of small farmers.

[15] Agro-industries consume approximately 60 percent of the country's wood production.

FIGURE V.2: FOREST AREAS IN HAITI, 1982



SOURCES: USAID, Country Environmental Profil, Haiti 1986.
Anglade, Georges, 1 'Espace Haitien, 1975

5.3 Food security and nutrition

Haiti's food and nutrition situation does not depend merely on what happens to income (including its distribution) and to the general price level. It also depends, to a considerable extent, on developments in agriculture and on the availability and prices of the foodstuffs which comprise the basic consumption basket.

As indicated earlier, the cropping area devoted to the production of staple consumption items has expanded slowly, while yields have been constant or even falling. The net effect of this has been a decline in per capita availability of certain basic foods. During the 1980-88 period, per capita availability of rice fell 16 percent and that of beans and corn dropped 10 percent. The poor supply of these traditional consumption items has certainly deteriorated the nutritional status of poor families.

The perspective of worsening foodstuff deficits in the years to come, can be roughly evaluated, if one assumes an income-elasticity of demand for food of 0.75, an increase in per capita income in the range of 0 to 1.0 percent, and a rate of population growth of 1.9 percent. Under these asssumptions, the demand for food would register an annual increase of 1.3-2.55 percent, which is rather greater than the 1 percent average increase in food production observed in Haiti in the 1980's. Therefore, the food supply situation has become so critical that efforts focused strictly on nutrition will have very limited success and probably an unnecessarily high cost if the production constraints are not attacked. It is against this background that the followinganalysis of the nutrition situation of Haiti should be considered.

The nutritional status of the Haitian population is the worst in the western hemisphere. Among the four Central American and Caribbean countries with the highest percentage of malnourished people (Haiti, Guatemala, Honduras and the Dominican Republic), Haiti is distinguished for having almost double the cases of malnutrition than the other three countries.

Food insecurity and malnutrition basically affect low-income people perpetuating the poverty cycle and imposing large human capital losses on the present and future generations. The segments of the population most affected by malnutrition, or most at risk, are pregnant women, nursing mothers and children under six years of age, specially those up to three years old living in marginal urban neighbourhoods and in rural areas. It is estimated that malnutrition is associated with 80 percent of cases of infant mortality.

The last national survey on the nutritional status of the population carried out in 1978 and published in June 1979 (Bureau of Nutrition - DSPP/AID) shows a very dramatic situation (Table V.6). Only 27 percent of the Haitian population enjoys normal nutritional conditions, while around 46 percent, 24 percent and 3 percent, respectively, have first, second and third degree malnutrition problems. This dramatic situation has been attributed mainly to the following factors: (i) underconsumption of foodstuffs; (ii) unsatisfactory hygienic and environmental living conditions; and (iii) little or inadequate knowledge about good health and nutrition habits.

TABLE V.6
PREVALENCE OF MALNUTRITION BY REGION,
(Percentage of population 1978)

REGION	THIRD	SECOND	FIRST	NORMAL
NORTHWEST	3.0	22.8	48.8	25.4
NORTH	5.7	28.5	46.2	19.6
ARTIBONITE	2.5	28.3	45.4	23.7
WEST	2.7	23.4	47.2	26.8
SOUTH	3.6	25.9	46.0	24.5
PORT-AU-PRINCE	1.5	13.1	43.8	41.7
HAITI	3.2	24.1	46.0	26.8

Source: National Nutrition Survey, Haiti 1978, Bureau of Nutrition.

A recent survey carried out by Fonds Parisiem has indicated that the dramatic nutritional condition of the Haitian population worsened during the eighties. Regarding the rural population, in 1980 the average daily per capita caloric intake was 1,590 calories and protein consumption was 40.4 grams. Considering the OPS/OMS daily recommendations, these figures correspond to a nutritional deficiency of aproximately 28 percent in calories and 30 percent in proteins. In 1985, this critical nutritional deficiency deteriorated further with the average daily per capita caloric intake falling to 1,300 calories and protein consumption dropping to 31.7 grams.

Although the available information does not allow one to obtain a precise picture of the geographic distribution of malnutrition in Haiti, a 1978 survey, based on a nationwide sample of 5,589 children, provides a reasonable indication of the existing situation. As Table A.7 indicates, the departments showing evidence of theacutest problems of malnutitrion are the North, the Northeast and Artibonite. In the Northeast, for example, only 3.8 percent of the children included in the Fort-Liberte sample presented a normal nutritional status.

5.4 Marketing systems

The agricultural economy of Haiti has two separate marketing systems: one is specialized in products for domestic consumption and is known as the Internal Marketing System (IMS); the other is specialized in export products. These two systems work almost independently of each other and have performed efficiently, given the socio-economic conditions of the country.

The IMS involves two main circuits: the rural circuits and the Port-au-Prince circuit (Figure V.3). The rural circuits are organized into three main intermediary markets: the rural, the regional and the provincial markets [16]. These markets link producers to consumers in rural and urbanareas. The marketing process in the IMS is performed through a chain of market places as shown in Figure V.4; such places are called carrefours and rural markets. Wholesalers' agents known as Madame Sara are responsible for the transportation of the products to all rural and urban markets throughout the country.

The Port-au-Prince circuit has the central market of Croix-des-Bossales with wholesale and retail functions, and the secondary markets of Vallières, Salomon and Cinquième Avenue. There is, on average, one neighborhood market per 25,000 people. These markets are simple street markets and very few of them have a minimum infrastructure in terms of roofing, accomodation, stalls and supervision during the night. In Port-au-Prince the wholesale market has a significant number of depot areas, while the secondary markets have none. Wholesale markets in other cities have very few depot areas.

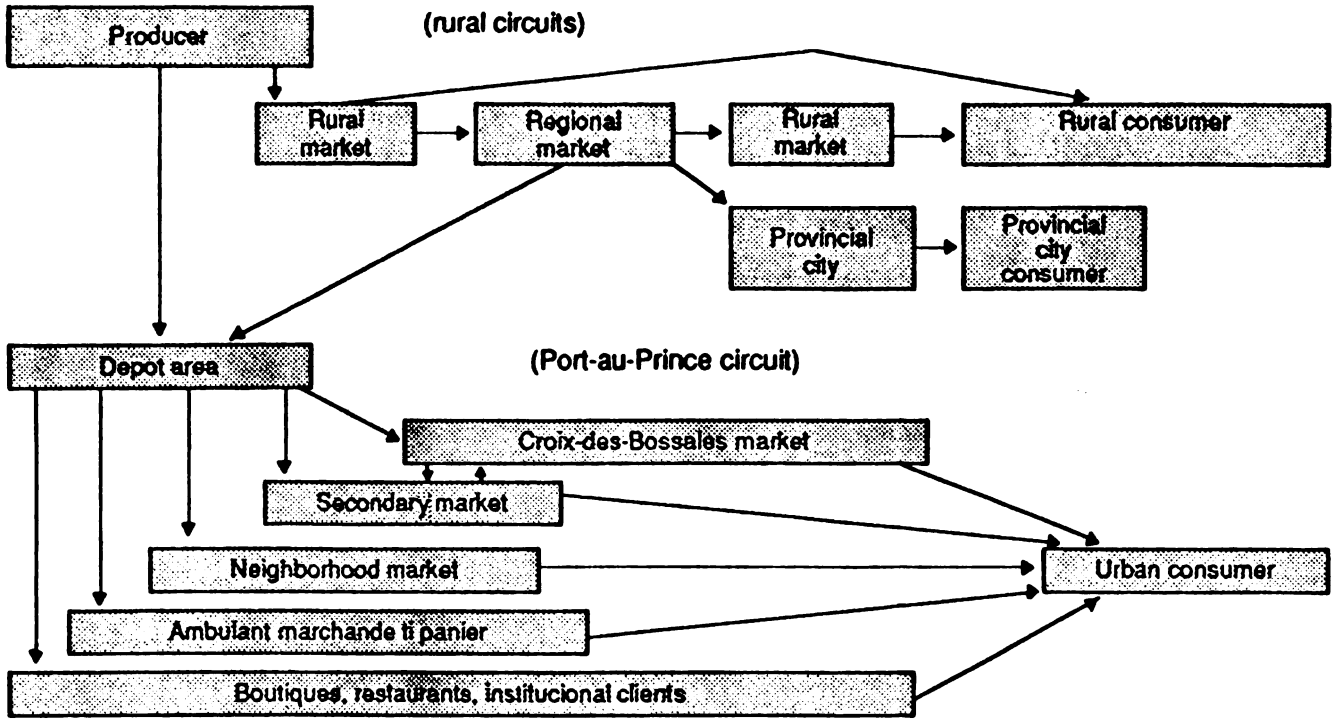
The main bottlenecks of the IMS are related to high transportation costs, lack of storage facilities, inadequate packing systems and poor comunication channels. Where rural roads have been built, both transport costs and spoilage have been reduced. The major road from Les Cayes through Port-au-Prince to Cap Haitien is a good example of this. Some improvements in the IMS could be brought about in terms of basic infrastructure (installations), systems (supervision, grading, standards, weights and measures control), marketing information and government regulation regarding plant and animal health. Such improvements would enable producers and consumers to benefit from gains which are normallypresent in more developed marketing systems.

The market channels for agricultural export products comprise two basic models which depend on the level of local processing (Figure V.3). The first model involves minimal processing while the second one is more sophisticated. The marketing structureof

[16] A study made by LaGra, Fanfan and Wesner (1975), looked at 70 percent of all markets of Haiti, and identified 426 semi-rural, 59 regional, and 34 urban markets.

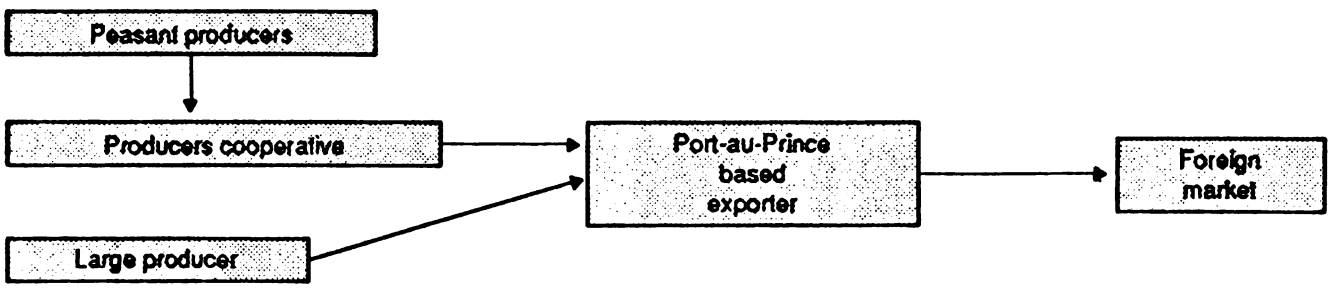
FIGURE V.3: MARKET SYSTEM

A: INTERNAL MARKET SYSTEM

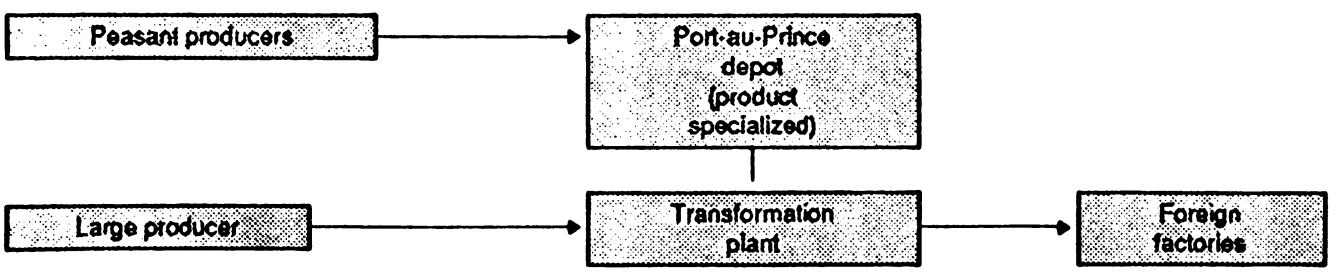


B: MARKETING CHANNELS FOR EXPORT CROPS

Model 1: Marketing involving minimal local transformation
(example: mangoes)

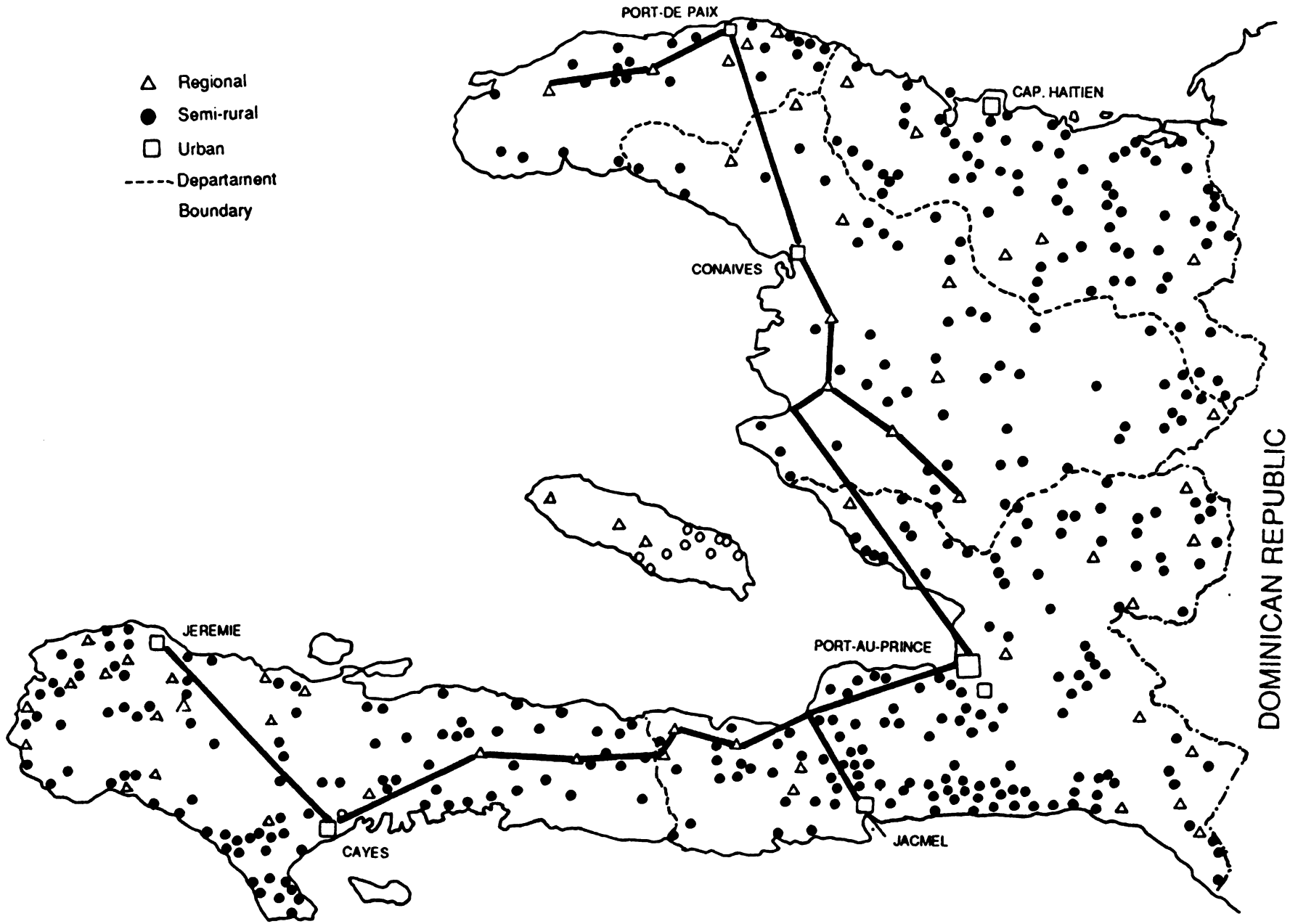


Model 2: Marketing involving local transformation
(example: limes)



SOURCE: USAID, 1987

FIGURE V.4: ROADS AND MARKETS IN HAITI



SOURCE: USAID - HAITI: AGRICULTURE SECTOR ASSESSMENT - NOVEMBER, 1987

these models is generally made up of just one intermediary, which makes them much simpler than that of the IMS.

Marketing of export products is highly developed, but because of oligopsonistic competition among exporters, farmers have been receiving very low returns.

5.5 Marketing development

Scant attention has been given by Haitian policy makers to the existence and development of markets which already exist and those that will result from the substitution of more profitable crops for sugar cane, corn and rice. This substitution process has been under way throughout the country, in recent years, and is particularly important now that world prices for those commodities have been depressed. It would be premature to encourage farmers to grow any new crops without first having: (i) identified suitable technological packages for those crops; (ii) defined a set of incentives to be given to farmers; and (iii) identified the agro-industries and the markets in which to sell the resulting production.

The development of agro-industrial oriented marketing systems is a way of injecting cash into the farming community and creating job opportunities in rural and urban areas. These marketing systems shouldlink entrepreneurs in Haiti to their counterparts outside in order to get access to foreign marketing expertise.

Improvements in marketing systems and support to existing and new agricultural products would represent substantial gains to Haitian agriculture. A first initiative should focus on measures regarding plant and animal health, marketing information and extension services, and the introduction of a reliable system of measures, weights, grades and standards would benefit not only producers through better prices for their products, but also consumers in the form of high-quality products.

5.6 Input and output prices

Information on agricultural input prices is scarce in Haiti, thus being an area which demands attention from the public sector. Nevertheless it is known that the input costs for individual farmers vary widely depending upon the supplier [17]. Agricultural production is limited to a few inputs, such as: fertilizer, pesticides, farm machinery and seeds. One part of these inputs, when available in the local markets, is purchased by farmers whithout any government intervention; and, the remainder, which depends on imports (Table A.8), is distributed by the government through the MARNDR, which sells at cost or at subsidized prices, through credit offered by the Bureau Nationale de Développement Agricole et Industriel (BNDAI).

Agricultural output prices have been more subject to government interventions than input prices. Sugar-cane, cotton, flour, milk, vegetable oils, sugar and lard, for example, are the traditional products whoseprices have been officially administered during most of the 1980's. Other products like cassava, corn, sweet potatoes, sorghum, rice, legumes, vegetables and fruits, have their prices freely determined by market forces, except for the effects of some trade policies.

Average retail prices for selected products like rice, sugar and flour showed a real declining trend over the 1979-89 period (Figures V.5 and V.6). On the other hand, the price of corn displayed an upward trend until 1986, declining steadily thereafter (Figure V.6). Up to 1986, agricultural output prices, controlled by the government, were kept relatively high, for both producers and consumers. Producers prices of rice, corn, sorghum, sugar and flour have been ranged from 130 percent to more than 150 percent of the world prices. While this implies substantial subsidies to producers it represents a heavy tax on consumers with significant

[17] Roe, Terry L., An Economic Evaluation of the Haitian Marketig System, 1978.

FIGURE V.5
HAITI, AVERAGE RETAIL PRICES OF RICE AND SUGAR, 1979-89

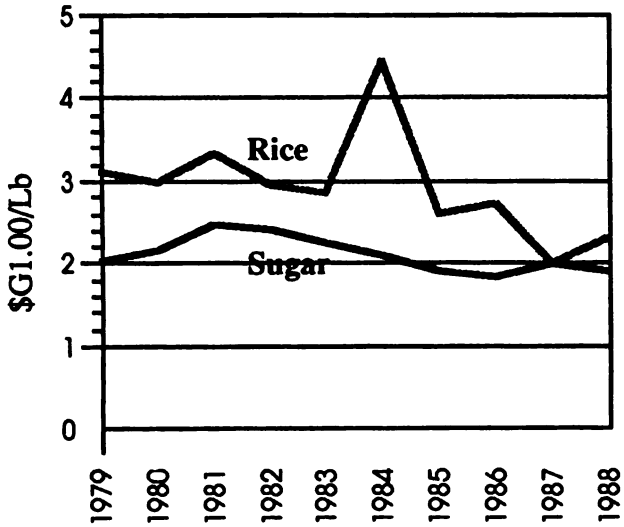
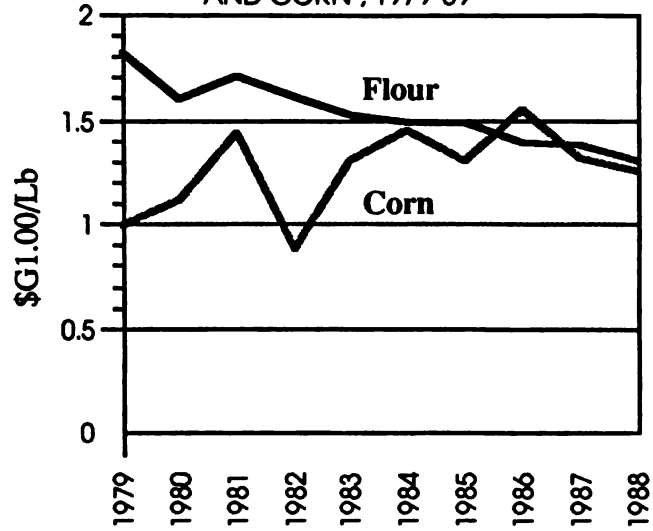


FIGURE V.6
HAITI, AVERAGE RETAIL PRICES OF FLOUR AND CORN , 1979-89



Source: Table A.9.

negative effects on the nutritional status of the low-income population.

The distributional consequences of the Haitian price policy have not been evaluated. However, some considerations can be made. Consumers in urban areas have supported a larger burden of the price policy since they consume the major part of the products that have had higher prices. Producers have been benefited by the high prices they have got domestically for their products, however they have been heavily taxed on their export products. As an example, the tax on coffee, the major agricultural export product, varied at around 16, 56 and 40 percent for the years of 1970, 1980 and 1986, respectively (Table A.10).

5.7 Agro-industrial development

Sugar refining has been for a long time the major agro-industry in Haiti. In the second half of the 1980's, however, this agro-industry stagnated as a result of the decline in the price of sugar-cane received by farmers. In addition to sugar refining, there are some other small scale industries in the country that process tomatoes, fruits, vegetables, coffee, cocoa, cotton, rice, and essential oils (vetiver, lime and amyris).

The commodity systems in Haiti are loosely organized with weak links between the producer and the well coordinated marketing and processing components of the agribusiness [18]. The exceptions are the well integrated producers of Famosa tomato products, the La Chapelle vegetable export enterprise, and the Mennonite Development Associates Cocoa Project.

Agro-industries in Haiti have not encouraged farmers to invest in mechanisms which would improve their productive capacity. This is because, they have paid relatively low prices for the crops bought. On the other hand, the agro-industries have been discouraged by the political and fiscal climate of the recent past. As a result, a number of industries have used inefficient equipment and processing methods. In addition to this aspect, agro-industrial growth in Haiti has been hampered by a set of other constraints such as: (i) lack of credit; (ii) inadequate support for non-traditional ex-

[18] Mock, C. & T. Mooney, Haiti: Agrobusiness and Rural Enterprises Assessment, USAID/Haiti, March, 1987.

port products; (iii) natural, infrastructure and management constraints [19].

Recent attempts have been made to overcome some of these limitations. For instance, the USAID Office of Private Enterprise Development has been developing a framework for agro-industrial establishement in Haiti. Moreover, it developed a framework for credit provision, promulgated an Agribusiness Investment Code, and created the Association of Agricultural Producers (APA), the Industrial Development Center (PROMINEX), the Management and Productivity Center, and the Consultative Mixed Committee for Industrial Development.

5.8 Agricultural research and technology transfer

Haiti's National System for Agricultural Technology Generation and Transfer (NARS) is composed of a number of governmental and non-governmental organizations (Table A.11). Among this set of institutions, the Center for Agricultural Research and Documentation (CRDA) and the Extension Section of the Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) are distinguished as being the most important ones. The former for developing and coordinating research activities and the latter, for being responsible for the national planning, coordination and implementation of the extension services.

Until recently, the NARS was characterized by a high degree of concentration of research development activities within the CRDA and of technology transfer within the Extension Section of the MARNDR. An effort was made to decentralize the system on a regional basis. Thus, the country was divided into nine departmental research units, which were subsequently subdivided into sub-units based on geographic considerations and available infrastructure. In view of the relatively weak coordinating capacity of the CRDA, this initiative resulted in poor interinstitutional linkages between this research agency and the Regional Development Institutions, the Agricultural Districts and the agricultural NGOs

Additional characteristics of the NARS have been: (i) its great dependence on external funds to finance the implementation of research and technology transfer activities. Approximately 90 percent of the financial resources of the system have come from external sources; and (ii) a relatively small number of agricultural researchers with universisty trainning.

TABLE V. 7
HUMAN RESOURCES OF
NARS's INSTITUTIONS
1991

INSTITUTION	HUMAN RESOURCES			TOTAL
	B.SC.	M.SC.	PH.D.	
CRDA	15	16	2	33
ODPG	9			9
DIASILE	5			5
ODVA	11	1	2	14
FAMV	3	1	2	6
TOTAL	43	18	6	67

Source: IICA, 1991

Note: CRDA - Agricultural Research and Documentation Center.
ODPG - Organism for the Development of Gonaives Plain.
DRIASILE - Regional Development Organism for Asile.
FAMV - Faculty of Agronomy and Veterinary Medicine.

The NARS has presented several deficiencies in the recent past. For instance, it has shown a weak relationship with the potential users of technology and a lack of strong operational capacity. Thus, Haiti's NARS has contributed very little to the growth of the agricultural sector output. As a result of extremely poor yields, the annual production of the major grain crops (rice, corn,

[19] Natural constraints encompass basically scarcity of suitable land and water; infrastructure constraints include roads, telecommunications, power costs and freight limitations. Management constraints in turn, include the skill to run sophisticated agricultural processing plants.

sorghum and kidney beans) registered a marginal increase during the last decades (see section 5.2).

5.9 Protection of environmental resources

Haiti's environmental resources have been marked by a strong degree of degradation. The massive deforestation process has reduced the country's forest area to only 1,070 square kilometers. At the same time, soil erosion has become one of the major constraints to sustained food production, particularly on hillside fields. Among other factors, this unfavorable picture reflects: (i) the increased use of marginal land (including steep hills) brought about by both strong pressure to increase food production and the low technology level of most farmers; (ii) the shortening of the fallow period; (iii) the wide use of wood charcoal as a relevant source of energy[20]; and (iv) the reduced amount of land related investments.

Given the poor situation of the country's environmental resources, the government has developed several efforts to improve it. For instance, two national parks, one forest reserve and several nature sites have been created by the MARNDR. Nevertheless, due to financial and human resources constraints, their delimitation and inventory have not been completed.

The government's initiatives have also been limited by a lack of an environmental law; poor technical and administrative capability in the protective services; deficient forestry researches; and the absence of a well designed program to develop the country's natural resources basis and the energy sector. Until issues such as these have been addressed, the environmental resources will continue to deteriorate.

[20] This situation has been aggravated by a set of fiscal and price policies which have imposed heavy taxes on fuel imports and high tariffs on electricity.

VI. SMALL FARM AGRICULTURE AND RURAL POVERTY

6.1. Small farm agriculture

6.1.1. Farm size

Haiti's agricultural sector is composed basically of small farms which provide employment for 67 percent of the country's active population, contribute 35 percent of the total GDP, meet between 70 and 80 percent of domestic consumption, and are responsible for 43 percent of total exports.

The small farm sector embodies two striking characteristics. The first one is the relatively small size of the production units. According to the latest census, in 1971, 59 percent of all farms contained holdings of one hectare or less, and shared approximately 21 percent of the total cultivated land (Table VI.1). Moreover, 96 percent of all farms had less than 5 hectares (typical size for the small Central-American farmer) and they accounted for 78 percent of total cultivated land.

Although some large farms do exist in Haiti (one 4,000 hectare and two 700 hectare farms have been identified), the average size for farms over 5 hectares is 8.28 hectares. This is because such a high proportion of these farms are only slightly over the 5 hectare size.

The second characteristic of Haitian small farm agriculture is that farms are composed of several plots, usually not contiguous to each other[21]. As Table VI.1 shows, the average number of plots per farm varies with farm size, between 1.46 plots for the 1 hectare size and 3.47 plots for the 4-5 hectares size. This means that in the latter case, farms are actually a 3.47 plot production

[21] With an objective of minimizing the risk of poor harvests and the need to sell and buy food, small farmers have often opted for cropping patterns that enable them to harvest food crops throughout the year. Thus, they have cultivated parcels in different ecosystems, sometimes by leasing plots from neighbors. As will be seen later, the types of production on different plots are a function of tenure status.

Table VI.1. SUMMARY STATISTICS ON AGRICULTURAL HOLDINGS HAITI 1971

Farm Size (ha)	Number of Farms	Average Nº of Plots per Farm	Number of Plots	Total Land (ha)	Average Plot Size (ha)
1 & bellow	361,985	1.46	530,480	5184,843	0.34
1 - 2	141,930	1.94	275,510	211,940	0.76
2 - 3	53,600	2.43	130,400	137,359	1.05
3 - 4	27,370	2.71	74,390	96,762	1.30
4 - 5	8,440	3.47	29,340	38,790	1.32
above 5	23,385	3.34	78,110	193,822	2.48
Total	**616,710**	——	**1,118,230**	**863,516**	——

Source: Anglade, G. L'espace haitian, 1975.

unit with an average plot size of 1.32 hectare, which again confirms the minifundium quality of Haitian agriculture.

An important consideration in the context of this second characteristic is the existence of different ecosystems within which the agricultural plots are embodied. The mountainous physiography of the country makes it a network of relatively small agro-ecological units with differing soil quality, rainfall pattern, and slope distribution (2 out of every 3 hectares of cultivated land are found on mountains, presumably on quite steep slopes). This characteristic has increased the difficulty of improving agricultural productivity. This is primarily because the technology generation and transfer process has not been flexible enough to reach a highly diversified small farm production system. In this sense, the extremely low technological level coupled with the relative small size of landholdings contribute, in large part, to the persistent deterioration of farmers' income.

6.1.2. Land tenure

The Haitian land tenure system consists basically of four tenure forms: (i) owner operated; (ii) renting from the state or from a private owner; (iii) sharecropping; and (iv) other forms, "authorized occupants and non authorized".

Among these four tenure modes, owner operated farming [22] is the most predominant followed by sharecropping and then renting from private owners. As Table VI.2 shows, in 1970 and 1980 (the most readily available data) from 60 to 72 percent of the land parcels were owner-operated, with sharecropping and renting arrangements accounting for 26 to 29 percent of land use.

Table VI.2. LAND TENURE AND LAND USE (by Percentage)

Tenure Category	1970	1980
Owner	60.2	72.3
Renting (from State)	3.8	2.8
Renting (Private)	10.5	10.5
Sharecropping	14.4	12.7
Other	11.1	1.8

Source: World Bank, Haiti: Agricultural Sector Review.

Table VI.2 also shows that it has traditionally been more common to rent from

[22] Most smallholders have customary ownership to the land they farm since they cannot normally afford the legal and title fees necessary to secure their claims.

private owners than from the state. This is because, despite being the largest single landowner, the state owns a relatively small number of farms (approximately 6.3% of all farms in 1989).

As a result of being predominantly a small-agriculture economy, Haiti's land tenure system has three distinguishing features. First, a number of peasants work different production units under distinct tenure arrangements, being at the same time owner operator, sharecropper and renter. This feature stems from the fact that the individuals who acquire more land than they are able to farm with their own labor [23], in general, rent out part of their land to tenants instead of financing the entire cropping cycle by wage payments.

Second, sharecropping and rental arrangements occur in the context of minifundium rather than in latifundium as in most of Latin America. And third, the largest land owners have holdings that are small in comparison to other countries in the region.

In synthesis, it can be argued that Haiti's land tenure system together with some other factors seems to have facilitated the subsistence of peasant families; nevertheless, rural poverty remains a extremeley serious problem.

6.1.3. Credit and marketing

Institutional agricultural credit in Haiti has been highly specific in its geographic coverage, confining itself mainly to the irrigated plains and the humid elevations which ensure higher production thus guaranteeing repayment of loans. This specificity is also evident when considering types of crops to be financed. Coffee, rice and beans, for example, have an attractive market value which facilitates access to formal credit. Therefore, with the exception of a very limited number of small farmers located in those regions and for some that have been engaged in coffee, rice and bean production, the vast majority of Haitian peasants have had no access to institutional agricultural credit.

As small farmers have not had access to formal systems of rural credit, their sources of financing have been:

i. Traditional intermediaries: such as factories, speculators, notaries, wealthy agricultural producers and large merchants.

ii. Socially-oriented intermediaries: such as foreign-based foundations, churches, local and international NGOs (non-governmental organizations), and national grassroots organizations, such as the caisses populaires, whose funds derive from their members' savings.

Loans from traditional financial intermediaries in general have been oriented towards satisfying basic consumption (school payments, weddings and funerals) and marketing needs (anticipated purchase of crops, purchase of cattle in the fetal stage). These are very short-term loans with very high interest rates (1 percent per day, 10-20 percent per month) not accessible to everybody. Although relevant data are not available, there is evidence that hundreds of thousands of small farmers have benefited from these types of loans.

Socially-oriented financial intermediaries have given loans for consumption as well as production based upon the applicant's conditions. In contrast to traditional financial intermediaries, loans from this group have a relatively low cost, which has favoured the rural poor. Recent information points to the existence of more than 70 socially-driven financial intermediaries functioning in Haiti, and servicing more than 60,000 clients.

[23] As will be seen later, small farmers' agricultural production systems in Haiti are labor intensive.

The marketing system within which the Haitian small farmer operates is highly complex, both in structure and organization. Its main characteristics are:

i. The presence of a great number of intermediaries. The most evident figure is the Madame Sara, who travels from place to place gathering agricultural products into marketable quantities.

ii. The lack of storage infrastructure at the farmer level, which is associated with a high degree of post-harvest loss which may be as high as 30 percent for certain food crops.

iii. The poor negotiating capacity of small farmers, due not only to the fragmented nature of their production, but also to the cyclical indebtedness of the rural poor who are forced into advanced production sales at very low prices.

Given the above characteristics, the rural marketing system has operated with certain limitations. These are: (i) lack of adequate physical infrastructure; (ii) insufficient transport facilities; and (iii) inexistence of a price information system. In spite of these limitations, however, and the deprivation of substantial income to the small farmers, the rural marketing system appears to be functional under existing conditions.

6.1.4.Technology and productivity

Traditionally, Haitian small farmers have employed rudimentary technologies to grow their crops. Tools are generally limited to hoes and "machetes". Neither manure nor commercial fertilizers are used in significant amounts, compared to international standards [24]. With the exception of part of the irrigated rice, all other crops are grown from poor quality seeds.

Table VI.3 presents a view of technology use in Haiti, according to tenure system. As can be seen, land owners are in a better technological position than the other groups. This is because, in general, this category of peasants enjoys a relatively better financial situation than the renters and sharecroppers.

Table VI.3. TECHNOLOGY USE IN HAITI by Land Tenure System, 1991

Technology type	Land Tenure System		
	Land owners	Renters	Share-croppers
Tractors	-	-	-
Ploughs	+	-	-
Hoes	++	+	+
Fertilizers	++	+	-
Fungicides	++	+	-
Improved seeds	++	+	-

Legend: -:insignificant use
+: moderate degree of use
++: higher degree of use

Source: Constructed by the IICA Office in Haiti from secondary source

Based upon this technology, Haitian small farmers have developed land and family labor-intensive agriculture characterized by multiple cropping sytems. As Table VI.4 shows, in 1989, small farmers used eight different multiple cropping systems in Carice and Mont Organise. Among these, cassava based is distinguished as being the most important cropping system in terms of total cultivated land by sharecroppers and land owners.

The current system of agricultural research and extension has a limited capacity to support the complex diversity of small farmer agricultural production adequately. The distribution of available human and financial resources in technology generation and transfer to regions, products and clients is concentrated in accessible, irrigated plains

[24] In the late 1980's, fertilizer consumption reached 12.4 Kg/Ha. This figure contrasts with a 37 Kg/Ha. in Latin America, 90 Kg/Ha. in Asia and 120 Kg/Ha. in industrialized countries.

Table VI. 4. CROPPING SYSTEM PATTERN IN CARICE AND MONT ORGANISE, 1989

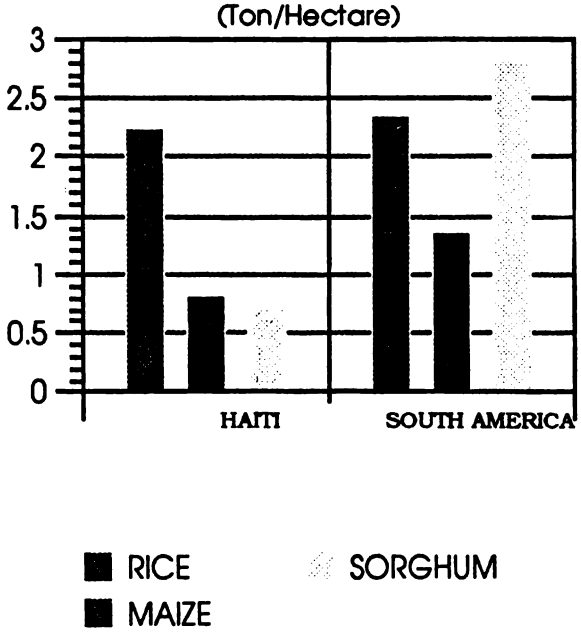
Cropping systems	% of total cultivated area (Carice & Mont Organise)		
	Sharecroppers	Renters	Land Owners
Coffee-based	16.2	19.0	23.4
Cassava-based	24.4	9.7	34.5
Pluvial rice-based	18.4	23.5	11.4
Yam-based	7.4	22.7	20.9
Lagoon rice-based	6.5	11.0	4.9
Bean-based	12.5	6.3	0.8
Maize-based	7.1	6.3	1.7
Sweet potato-based	7.6	1.6	2.3
Total	**100.0**	**100.0**	**100.0**

Source: AGRICORP. Haiti, 1989.

and humid plateaus, leaving the bulk of agro-ecological conditions untouched. The agricultural agencies, which, in the past, were evenly distributed in the country, have disappeared or are extremely weak. Therefore, the rural poor are left without access to technology, market information and modern agricultural inputs.

Given the above circumstances, agricultural productivity is relatively low, compared to international standards. As Figure VI.1 shows, in 1988 the productivity of maize and sorghum per unit of area in Haiti was 39 and 74 percent smaller, respectively, than the average yield in South America. Rice, in turn, presented a relatively better picture vis-a-vis the other crops. This fact, however, hides the large differences that exist between various production regions in terms of rice yield. Specifically, while the Artibonite and West departments showed yields of 3.0 and 2.1 ton/hectare in 1988, respectively, the productivity in the other regions reached at most 1.6 ton/hectare (i.e., 75 percent of the yield observed in West).

FIGUREVI.1. RICE, MAIZE AND SORGHUM YIELD IN HAITI & IN SOUTH AMERICA, 1988
(Ton/Hectare)



Source: FAO, Quarterly Bulletin of Statistics 1990.

6.2. Rural poverty

With approximately 80 percent of its population living in rural areas and most of it with annual incomes under US$ 150 (the poverty line of the World Bank) Haiti's poverty is concentrated in rural areas. Only 1 percent of rural Haiti has access to health services; 30 percent of the rural population drink good quality water. Caloric and protein deficits have increased to 40 percent and 50 percent, respectively in the rural areas, as compared to the nation-wide 14 percent and 32 percent deficits.

Taking income as a measure of poverty (peasants with annual income lower than US$ 150), five categories of poor can be distinguished in rural Haiti: landless peasants, small landowners, sharecroppers, land

Table VI. 5. HAITIAN SMALL FARMER INCOME ACCORDING TO TENURE STATUS
(In US$)

INCOME SOURCE	LANDLESS			SHARECROPPERS			RENTERS			OWNERS		
	I c)	II	III	I b)	II	III	I d)	II	III	I a)	II	III
A. Non-agricultural: total	60	54	72	26	30	35	34	30	40	44	20	42
Commerce	--	--	--	--	--	--	22	10	15	--	--	20
Handicraft	40	--	18	12	--	10	--	--	--	26	20	22
Daily agricultural workers	20	54	54	14	30	25	12	20	25	18	--	--
B. Agricultural total	--	--	--	80	100	80	86	110	90	123	130	105
GRAND TOTAL	**60**	**54**	**72**	**106**	**130**	**115**	**120**	**140**	**130**	**167**	**150**	**147**

Source:
I: a) AGRICORP/IRAM: Agriculture et paysans (Paysans de Dondon, Nord d' Haiti) du Nord et du Nord-est (ODN-FACO, 1985); (b) AGRICORP/IRAM: (Releve à Grand -Bassin, Nord-est d' Haiti, 1985); c) AGRICORP/IRAM: (Releve à Quartier Morin, Nord d' Haiti, 1985); d) AGRICORP/IRAM: (Releve à Grison Garde, Nord d' Haiti, 1985).
II Eddy M.E. Communication personnelle, 1991.
III Azael A. Communication personnelle, 1991.

renters and small buyers of agricultural products.

6.2.1. Landless peasants

With an annual income varying from US$ 54 to US$ 72 (Table VI.5), the landless peasants have traditionaly been the poorest of the poor. Numbering 30,000 in 1950, this group of poor had increased to 600,000 by the end of the last decade. This means that every year during this 30-year period, roughly 19,000 individuals joined the poorest rural group. Given this situation, the landless peasants have been one of the major targets of NGO projects.

Having no access to land, this important segment of the rural population is left with the choice of selling their labor or migrating. Nevertheless, the family labor-intensive nature of Haitian small-farmer agriculture leaves landless peasants only seasonal employment opportunities (export crop harvesting like coffee) in which cases their factor share can be as low as US$ 0.6 per day, when they are not simply paid with a dish of food. Commerce, which requires some initial investment, is not an alternative for landless peasants because of lack of access to credit from even traditional sources. Although no data are available, it is estimated that landless peasants make up the greatest share of rural migrants.

6.2.2. Sharecroppers

Sharecroppers traditionally have been the second poorest group in rural areas. As Table VI.5 shows, in 1985 this group of poor had an annual income ranging from 106 to 130 american dollars, 82 percent of which was derived from agricultural activities and the rest from the sale of labor force and other activities.

Sharecroppers are more often found in the North-West, North and West departments rather than in the Artibonite and South.

Between 1970 and 1980, the relative percentage of land cultivated under sharecropping arrangements decreased from 14.4 to 12.5. Compared to the relative increase of landless peasants during the last 30 years, this suggests a high rate of "descampenization" (individuals moving out of agriculture). The degree of sharecropper access to technology is limited and his control over produc-

tion depends on the degree of tenure vertical integration.

6.2.3. Land renters

Compared to the previous groups of rural poor, the land renters are in a better position with an annual income varying from US$ 120 to US$ 140 in 1985. As Table VI.5 shows, approximately 25 percent of this income derived from non-agricultural activities with commerce distinguishing this group from all others by contributing additional income.

Due to their relatively improved income status, land renters enjoy an estimated 1300 daily calorie intake (1985 figure) which is still below international standards.

6.2.4. Small landowners [25]

Small landowners, in general, are the richest of the rural poor. Their estimated annual income of US$ 147 to US$ 167 in 1985 was approximately 22 to 28 percent higher than that of sharecroppers and 18-20 percent higher than that of land renters. Agricultural activities provided 71-87 percent of their total annual income, leaving the balance to non-agricultural sources, of which craftwork generated, in general, 52-59 percent.

Small landowners' use of technology varies with region. In the rice-producing Artibonite Valley, where ODVA, a Regional Development Organization is located, their net profit can rise up to US$ 237 per rice production period. Nevertheless, due to the country's poor delivery capacity of improved agricultural services, this potential has not been fully explored.

[25] Small landowners are those farmers whose land size is below 1 hectare.

[26] In addition to the small buyers of agricultural products there is another group of rural poor ("coutie" or "coutche") whose major activity consists in providing information to the Madame Sara regarding farmers that have agricultural products to sell. In view of the unavailability of information regarding this latter group of rural poor it will not be included here.

In addition to having a larger income, small landowners traditionally have had better cropping systems which have enabled them to enjoy better diets.

6.2.5. Small buyers of agricultural products

The fifth group of rural poor is composed of a number of small intermediaries that participate in the marketing chain buying agricultural commodities, livestock and exporting crops from local producers [26]. Depending on the region where they work and on the products that they usually buy, this group of rural peasants are known as voltige, sousmarin, bafonneur, secrete, or tioke.

In general, these marketing intermediaries are illiterate men who live in rural villages located near the farms from where they buy the agricultural products. Moreover, the majority of them are not engaged in farming and do not have the necessary capital to buy the products. Thus, in order to carry on their commercial activities they receive a weekly credit from the Madame Sara. This credit is paid back with the products bought. There is no available information regarding the number of individuals that comprise this group of rural poor. Nevertheless, it is estimated that there are at least 100,000 small buyers of agricultural products spread through the country.

These small intermediaries do not have a fixed remuneration nor are they considered employees of the Madame Sara. The profit they earn in their marketing activities results from paying a smaller price than the one set by the merchant to whom they will deliver the product. There is no information regarding the level of income of this group of rural poor. However, taking as an example the buyers of kidney beans, who earn US$ 0.20 per bag, a rough estimative of their

[27] This estimative was reached by assuming that this group of intermediaries can buy between 25 and 30 bags of beans per week during six months of the year.

annual income would be US$ 130 to US$ 156[27]. In addition to this cash income, this group of rural poor receive, in certain cases, some gifts (used clothes, shoes, etc.) from the merchants to whom they usually sell the products bought.

6. 3. Poverty differentials in Haiti

The great majority of Haiti's rural poor are mainly found in regions where the process of deterioration of the country's productive resource base has been in constant decline during the last ten years.This is particularly noticeable in the Northwest department where accelerated soil erosion, inadequate land tenure arrangements and agricultural droughts, together with population pressure on land, have seriously reduced the reproductive capacity of the labor force of rural families. Other regions face serious threats of absolute poverty, as is, for example, the case of Fonds-des-Negres in the Southeast where about 46 percent of farms are below 0.5 hectare and 64 percent of them show evidence of serious erosion.

As Figure VI.2 shows, among all departments, the Northeast and the Southeast are distinguished for having, in general, the lowest productivity per unit of area. Considering the association between yield level and farmers income, Figure VI.2 suggests that those two departments are characterized also for being two of the poorest regions of the country.

The access to health services as poverty indicator also shows regional differences. As Table VI.6 shows, in contrast to the other departments, the Northwest and the Southeast have been less favoured in terms of public health services. In 1987, while Departments such as the Artibonite had four hospitals and more than 50 physicians to meet the population needs, the corresponding figures for the Northwest and the Southeast were one hospital and less than 30 physicians.

The low degree of health coverage provided by the Haitian public sector has motivated Non-Governmental Organizations to increase participation in these domains during the last five years. This is reflected by a high percentage of NGOs working in health services. As will be seen later (Chapter VII), there are approximately 14 NGOs providing health services in the Northwest and Southeast departments. Nevertheless, considering what it is observed in the other regions, this number is still small in the face of the above mentioned regional differences.

Rural poverty as expressed by levels of nutrition also shows regional differentials. Infant third-degree malnutrition ranks the North region at the top of the list with a frequency of 5.7 percent, followed by the South (3.6 percent), the Northwest (3.0 percent), the West (2.7 percent) and Artibonite (2.5 percent)[28].

Closely associated with rural poverty is the migratory phenomenom, which during the last thirty years has taken on alarming proportions. From only 18,872 in 1950, the absolute number of migrants has increased up to 200,000 in 1980, thus indicating that each year about 6,000 Haitian, coming mainly from rural areas are migrating in-country and/or out of the country. The data available point towards high migratory flows from the Southern penisula, the North and the South regions, either to the capital city of Port-au-Prince, where off-farm job opportunities are relatively scarce, or abroad as the so called boat-people.

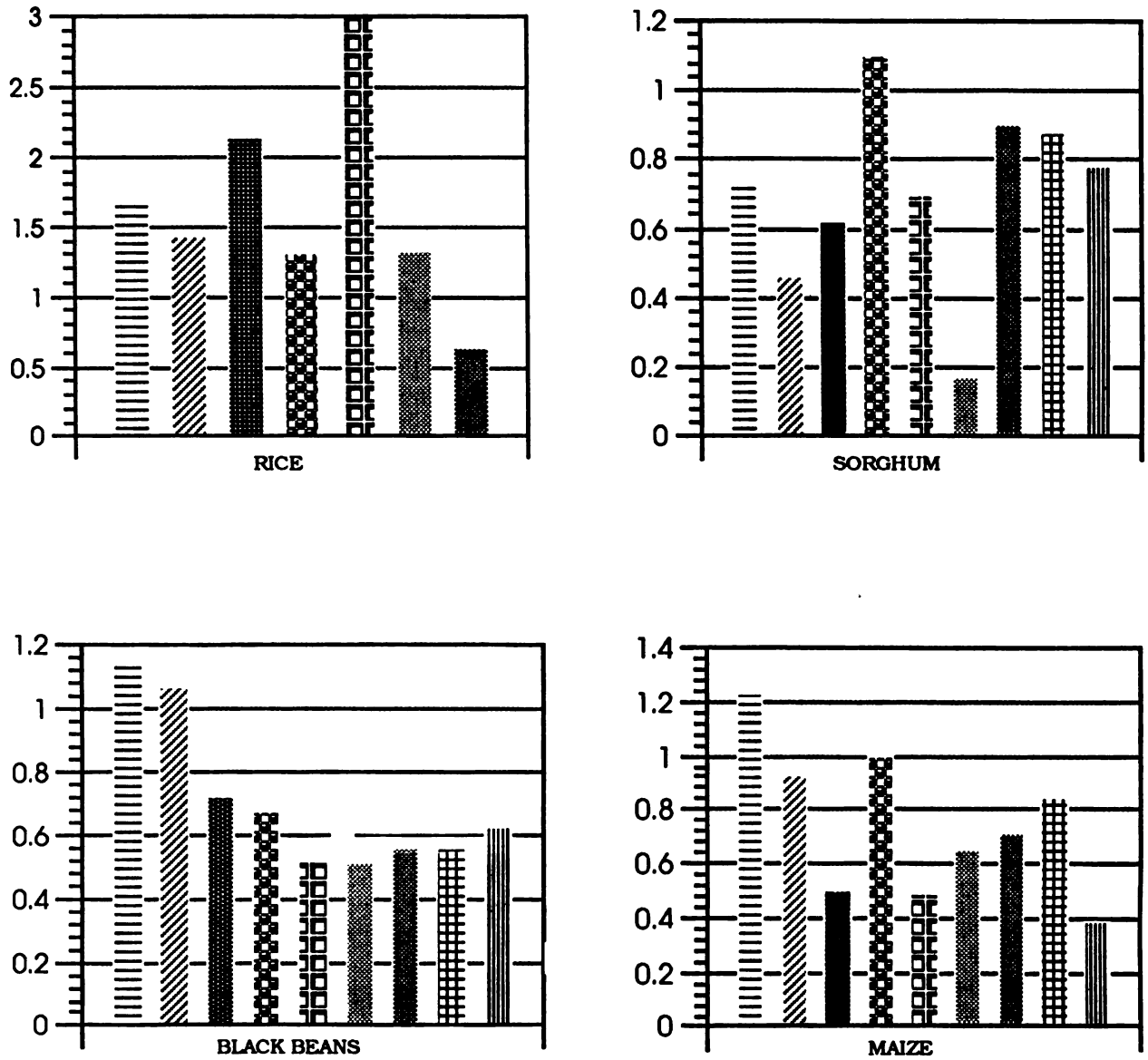
6.4. Recent evolution of rural poverty

6.4.1. Income and nutrition

The Haitian rural economy has continued to deteriorate in the last ten years, which in turn has significantly increased rural poverty. Per capita agricultural GDP fell aproximately 10 percent in real terms during the 1981-87 period dropping from US$ 197 to US$ 179. Caloric intake dropped from 1,590 to 1,300 calories per day in the

[28] IHSI, "Études des relations entre la population et les besoins alimentaires en Haiti", 1989.

FIGUREVI.2. HAITI RICE, MAIZE, SORGHUM AND BLACK BEANS YIELD BY DEPARTMENT ,1988
(Ton per Hectare)



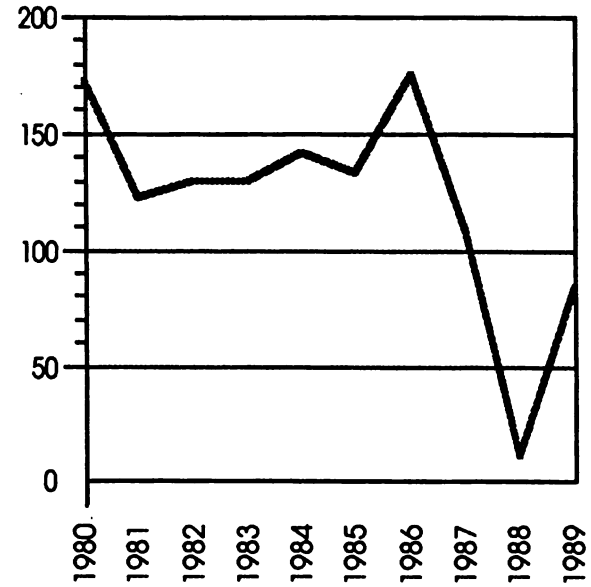
Source: USAID. Estimation de rendements des cultures, 1990.

Table VI.6. PUBLIC HEALTH SERVICE IN HAITI 1987

DEPARTMENT	HOSPITALS	NUMBER OF PHYSICIAN	DISPENSARY
NORTHEAST	1	8	14
NORTHWEST	1	17	37
SOUTHEAST	1	25	24
CENTER	2	19	21
GREAT ANSE	1	26	16
SOUTH	4	33	37
NORTH	1	54	29
ARTIBONITE	4	53	25
WEST	24	604	69
TOTAL	**39**	**839**	**272**

Source: Ministère de la santé publique et de la population (1990)

FIGURE VI.3
HAITI, INTERNATIONAL PRICE OF COFFEE, 1980-89
(US$ of 1985 /pound)



Source:International Financial Statistics

first half of the eighties, while at the same time, daily protein comsumption was reduced from 40.4 to 31.5 grams. The agricultural sector's capacity to absorb labor has decreased, aggravating the emigration process.

Various factors have contributed to this phenomenon. Among them, the following can be distinguished: First, an important segment of the rural poor was affected by the tax on coffee production in the early 1980's and by the drop in the international prices of this commodity in the second half of that decade (Figure VI.3). Secondly, the increased utilization of marginal lands combined with land fragmentation, exerted a negative impact on the income of a relatively large number of farmers. The degree of rural poverty was influenced also by the negative effect produced by the deterioration of the industrial sector. The number of employees working in industries was reduced from 60,000 in 1981 to 40,000 in 1991 causing income distortions and underemployment. Thus, in addition to affecting the demand for agricultural products, this sector has not been able to absorb the off-farm migrants. Other factors, including deforestation, soil degradation, change in rainfall pattern and decline of water flow in the rivers, serve as major contributors to the deterioration in rural poverty.

A number of efforts were made to combat rural poverty. Since 1980, the Government of Haiti has been implementing a series of agricultural oriented projects. Farmer participation has been limited, which may explain the relatively low impact of these projects. In addition, the Government created several agricultural development institutions (agricultural research, technology transfer, credit, etc.) and expanded the number of district offices. Nevertheless, due to the worsening of the government's financial situation, the shortage of human resources, and political instability, the services provided by these new organizations did not have a significant impact on rural poverty.

The NGOs have also implemented a number of projects aimed at improving the drastic conditions faced by the rural poor. Most of these projects have been devoted to reforestation, health care, nutrition and soil conservation (Table VI.7). There is no avail-

Table VI. 7. HAITI: MAJOR FOREIGN ASSISTANCE PROJECTS 1980-91

Project identification	Execution period	Main intervention
PADF/USAID	1985 to date	Reforestation
CARE	1982 to date	Refectories, Health Care, Reforestation
CARITAS	1985 to date	Refectories, Reforestation
USAID/Cayes-Pic Macaya	1985 to date	Agro-Forestry
Plan parrainage PNUD (Jacmel - Artibonite)	1988 to date	Handicraft, Credit
IICA/USAID	1983-87	Swine Repopulation
	1990 to date	Coffee Modernization
FAO/GVT	1982 to date	Nutrition
	1987 to 1989	Credit
	1982 to date	Soil Conservation
UNICEF/PAHO	1989 to date	Vaccination
ACDI	1984 to 1990	Production
FIDA/GVT	1983 to date	Irrigation
PAM	1984 -1985	Soil Erosion Control
	1987- 1989	Assistance to Hospitals
	1984 -1985	Assistance to Cooperatives
	1983 -1985	Family Planning (second phase)

Source: Constructed by IICA Office in Haiti based on institutions' information

able information regarding the overall contribution made by the projects carried out by these organizations. Nevertheless, all evidence indicates that, in general, they have provided significant services to the rural communities.

In view of the great need faced by the country, a number of foreign assistance projects are presently under consideration by various agencies. Table A.12. provides a list of most of them.

6.4.2. Health conditions

In spite of some modest improvements (e.g. mortality, on the whole, registered a downward trend), health conditions in Haiti remained quite precarious in the 1980's. As Table VI.8 shows, at the end of the last decade: (i) the crude death rate was 12.6 per thousand inhabitants; (ii) approximately 97 live-born children died before one year of age; and (iii) life expectancy at birth continued to be very low (55 years) compared to international standards.

TABLE VI.8 HAITI, MORTALITY AND LIFE EXPECTANCY AT BIRTH, 1965-90.

Item	1965 1970	1970 1975	1975 1980	1980 1985	1985 1990
Mortality (1)	19.4	17.0	15.2	13.8	12.6
Infant Mortality (2)	150.3	134.9	120.9	108.2	96.6
Life expectancy (3)	46.3	48.5	50.7	52.7	54.7

(1) Average annual rates per thousand inhabitants.
(2) Average annual rates per thousand life births.
(3) Years
Source: CEPAL. Statistical Yearbook for Latin America and the Caribbean.

Diarrhea has been the leading cause of death, followed by respiratory diseases. In the early eighties, diarrhea accounted for 75 percent of infant deaths, for 50 percent of deaths among children 1 to 4 years, and for 20 percent of total deaths. Beginning in 1983, the government implemented a diarrheal control campaign to reduce mortality from this cause. The implementation of this campaign seems to have achieved its goal. Nevertheless, despite the reductions achieved, diarrhea continues to be one of the principal causes of death in the country.

In addition to the above, the Haitian population has suffered from various diseases preventable by vaccination. According to Table VI.9, tuberculosis, measles and whooping cough have been the most important of these diseases in terms of incidence. Tetanus and poliomyelitis have not had a large incidence; nevertheless, they continue to be a serious problem to certain segments of the infant and preschool population [29].

TABLE VI.9. MORBIDITY FROM DISEASES PREVENTABLE BY VACCINATION, HAITI, 1985-87 (Incidence per 100.000 population)

DISEASES	1985	1986	1987
Tuberculosis	126.80	157.40	143.00
Measles	39.50	4.90	56.50
Neonatal tetanus	1.60	1.00	3.20
Tetanus all ages	5.70	2.20	7.30
Diphteria	1.00	0.07	0.10
Poliomyelitis	1.60	0.00	0.20
Whooping cough	25.70	8.60	23.50

Source: Pan American Health Organization, Health Conditions in the Americas, 1990.

In an effort to reduce the incidence of preventable diseases, the government of Haiti established a vaccination program aimed at increasing the immunization coverage in children under 1 year for DPT, polio, BCG and measles. The implementation of this program improved significantly the immunization coverage in the second half of the 1980's (Table A.13), particularly for DPT and polio. Despite the progress made, however, the immunization coverage remains low, except for BCG.

Acquired Immunodeficiency Syndrome (AIDS) and malaria have also been

[29] Of the 318 cases of tetanus registered in 1985, 171 were in children under one year of age, and 69 percent of the deaths were in that same age group (Pan American Health Organization, 1990).

major health problems in Haiti. According to the Pan American Health Organization, the incidence of AIDS among the Haitians has increased dramatically since its appearance in the country in 1979. Specifically, in the 1979-83 period, the incidence rate was one case per month, but since 1986 it jumped to forty cases per month. In view of this rapid expansion, Haiti soon occupied the fifth place in the list of countries with the highest cumulative number of reported AIDS cases.

The critical status of health conditions in Haiti has been aggravated by extremely poor sanitation services, an inadecuate supply of drinking water, and rudimentary dwellings. In 1988, only 22 percent of the country's population was served with sewerage and excreta disposal and 42 percent had access to drinking water supply.

To combat health problems, Haiti has a health care system comprised of public, private for-profit and nonprofit establishments. In 1987, this system consisted of 49 hospitals, 50 health centers with beds, 219 dispensaries and 88 health centers without beds. Among other aspects, this system has been characterized by: (i) an uneven distribution of health facilities (and health personnel) between regions (Table A.14); (ii) a significant increase in health expenditures by both public and private organizations (Table A.15); (iii)an unbalanced allocation of financial resources of the Ministry of Health and Population towards salaries; and (iv) inefficient deployment and poor quality of health services staff.

VII. AGRICULTURAL INSTITUTIONS

The weak institutional capacity of the agricultural public sector may be considered a major constraint to improving the socio-economic status of the rural population. Overall, five types of problems are typically found in the Haitian institutional public system:

a. over-centralized administrative system ;

b. lack of clarity in the compensation and employment policy;

c. poorly qualified personnel;

d. unclear regulations and procedures leading to poor resource allocation;

e. absence of community participation in the planning and implementation of programs and projects.

The recognition of limited administrative development and low operational capacity of the public sector has motivated a number of institutional reforms in the last two decades. The cornerstone of a new emphasis on institutional development dates from 1974 when the government created a commission to implement an administrative reform focusing on: (i) rationalizing public sector institutions and procedures; (ii) training and skill development of personnel; (iii) development of regional institutional capacity; and (iv) administrative decentralization.

This commission was reorganized in 1981, and again in 1986, in the context of the institutional reforms included in the stabilization program launched by the provisional government after the fall of the Duvalier régime. The successive institutional reforms implemented over the last two decades brought about some changes in the agricultural public sector. These included: (i) transformation of institutions directly or indirectly connected to agricultural sector development (for example, the National Council for Development and Planning was changed in 1979 to the Ministry of Planning and more recently to the Ministry of Planning, External Cooperation and Public Function, MPCEFP); (ii) institutional restructuring of the Ministry of Agriculture, Natural Resources and Rural Development (MARNDR); and (iii) creation of new institutional formats for agricultural development institutions like the Regional Development Organization.

Efforts to develop the administrative and management capacity of the Haitian public sector have taken place mainly under the support of international donor-funded development agencies (e.g. AID, CIDA) and multilateral financing agencies (e.g. World Bank). In this sense, the most striking feature of the institutional animation within the agricultural sector was the appearance of a multiplicity of Non-Governmental Organizations (NGOs). The lack of public sector capacity to deliver goods and services, particularly to rural populations, has resulted in a major stimulus for the consolidation of NGOs through significant development assistance from donor agencies. Other private voluntary organizations such as cooperatives and local councils, play a limited role in the agricultural institutional system. A complete picture of the structure and organization of the institutional system of the agricultural sector is shown in Figure VII.1.

Despite government's efforts and donors' support, the level of administrative and managerial capacity of agricultural public sector institutions remains low and coordination with NGOs is negligible. The institutional reforms have followed the traditional pattern of changes in leadership and reassignment of staff rather than concentrating on the substance of the administrative reform mandate. Therefore, the need for institutional reform which aims to improve overall performance of the agricultural public sector resurfaces as a priority in the nineties.

7.1. Structure and organization of the agricultural public sector institutional system

The agricultural public sector comprises a set of 12 important institutions:

- The Ministry of Agriculture, Natural Resources and Rural Development (MARNDR);
- The Faculty of Agronomy and Veterinary Medicine (FAMV);
- Eight semi-autonomous Regional Development Organizations (RDOs);
- Two semi-autonomous credit institutions.

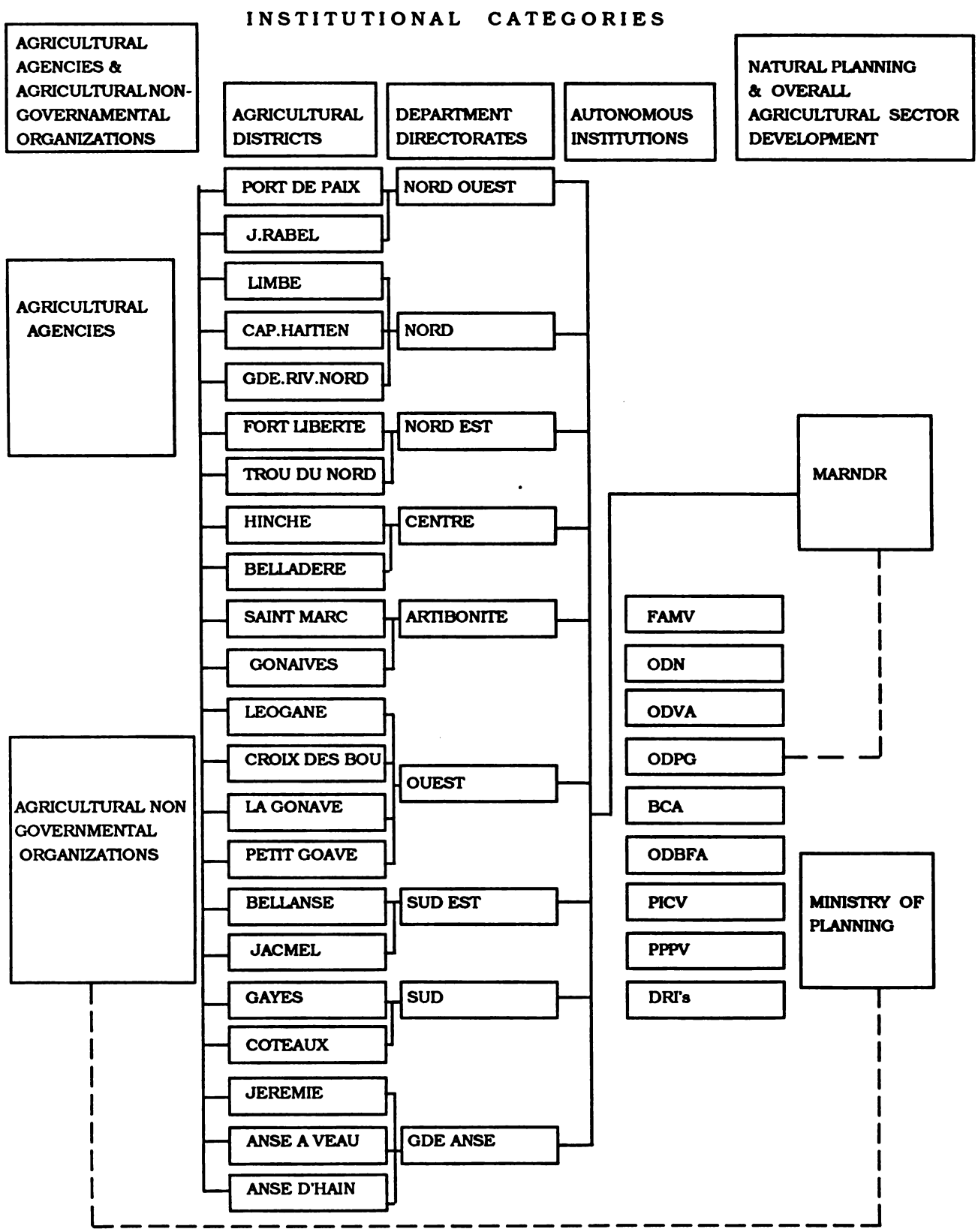
7.1.1 The Ministry of Agriculture, Natural Resources and Rural Development (MARNDR)

The MARNDR, whose headquarters are located at Damien, just outside Port-au-Prince, has as its main functions the promotion of agricultural development and the management of natural resources. Other ministries, however, also have functions related to the agricultural sectors such as the Ministry of Commerce and Industry and the Ministry of Public Works, Transport and Communications. The former deals with export promotion while the latter is in charge of rural roads. The MARNDR itself is organized in five technical areas: plant production, animal production, natural resources, rural development and administration[30]. Planning is carried out by the Unité de programmation which is also responsible for project evaluation and monitoring. The MARNDR carries out its activities through the Decentralized Territorial Services grouping 9 Department Directions, 22 Agricultural Districts and 80 Agricultural Agencies. The organizational chart of the MARNDR, indicating the decision-making hierarchy, is shown in Figure VII.2.

A well-recognized constraint on the MARNDR in its efforts to manage and support agricultural development is its weak institutional capacity. An over-centralized administrative system characterizes the MARNDR and contributes to its limited operational capacity. The farming community enjoys a limited participation in the decision-making process of the decentralized local services (Department Directorates, Agricultural Districts and Agricultural Agencies). In many parts of Haiti the MARNDR's decentralized local services have a limited functional and administrative presence. The scope of the problem is illustrated by the distribution of MARNDR's financial resources by region. In 1990, for example, the average operating budget per agricultural district was only Gdes 33,000 (US$ 4,700).

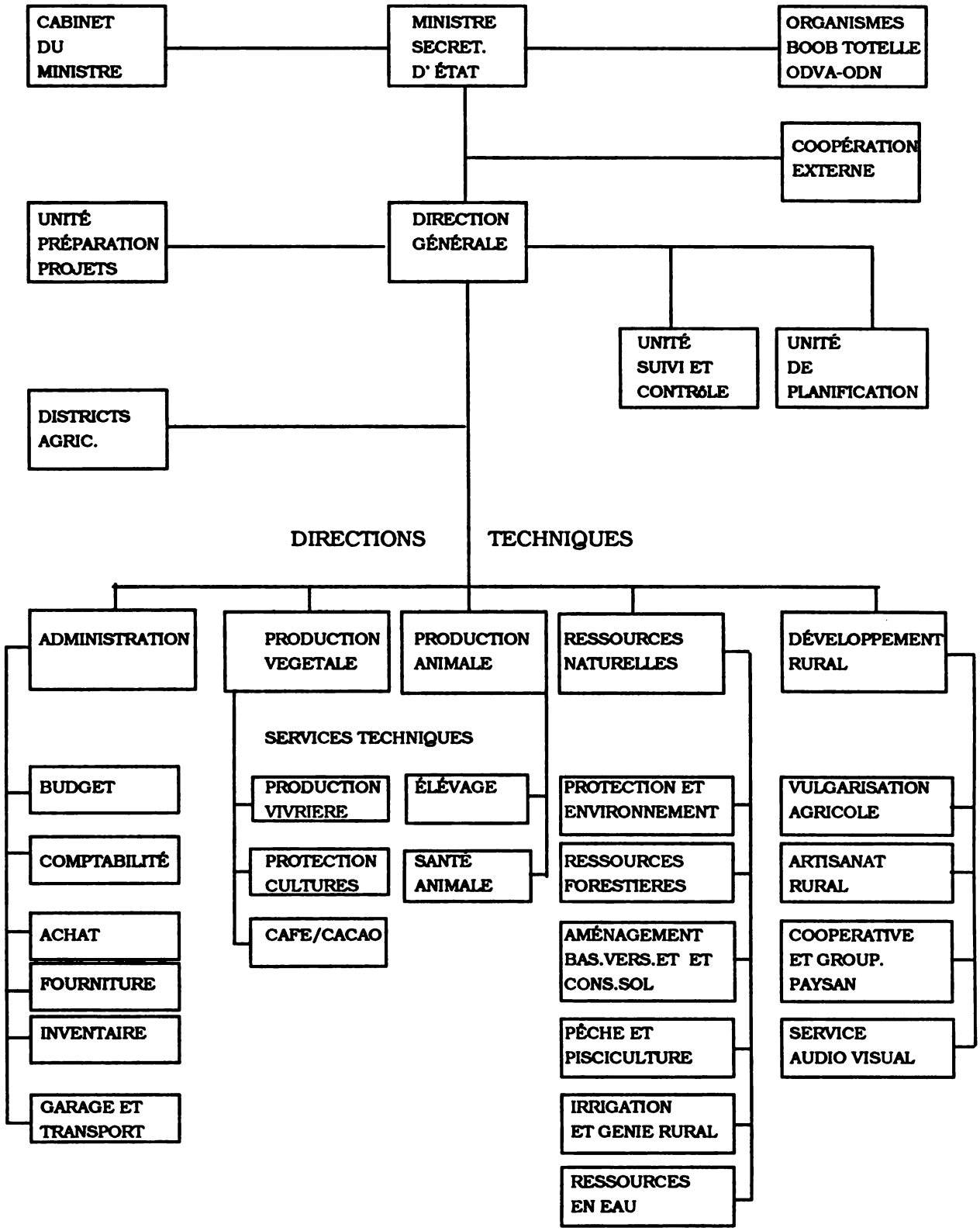
[30] The Center of Research and Agricultural Documentation (CRDA) depends of the General Direction of MARNDR

FIGURE VII.1
STRUCTURE AND ORGANIZATION OF THE PUBLIC AND PRIVATE
AGRICULTURAL SECTOR INSTITUTIONAL SYSTEM
March,1989



SOURCE: Constructed from official data available at MARNDR.

FIGURE VII.2
MARNDR's ORGANIZATIONAL CHART
September 1986



Source: Constructed from official data available at MARDNDR.

In recent years, the MARNDR has been criticized for a lack of administrative coordination, poor resource allocation, overlapping jurisdictions and regional divisions, and inadequate field staffing and support. In light of the preceding, some international agencies have included institutional strengthening of the agricultural public sector as a component of their sectorial development projects. A case in point was the USAID agricultural project Projet de développement agricole integre (PDAI) which was concluded in 1985.

7.1.2 Regional Development Organizations (RDOs)

The Regional Development Organizations (RDOs) operate under the administrative leadership of the MARNDR. Figure VII.3 shows the legal status, geographic location and main functions of the Regional Development Organizations operating in Haiti. These organizations were created for the purpose of implementing specific projects in the absence of pre-existing government organizations. This is the case of the RDOs established to implement multilateral bank-funded projects such as Organisme pour le développement du Nord (ODN) and Organisme pour le développement de la plaine de Gonaives (ODPG).

Despite their functional similarity, RDOs have generally worked independently of each other even when they are located within the same geographic department. This situation reflects unclearness of regulation and policy manuals which define both the MARNDR's sectoral responsibilities and how its different organizations should articulate to fulfill them.

FIGURE VII.3
REGIONAL DEVELOPMENT ORGANIZATIONS

INSTITUTIONS	LEGAL NATURE	GEOGRAPHIC LOCATION	MAIN FUNCTIONS
ODVA	PUBLIC, SEMI-AUTONOMOUS	ARTIBONITE Valley	REGIONAL HYDRO-AGRICULTRAL DEVELOPMENT (IRRIGATION, DRAINAGE TECHNOLOGY DEVELOPMENT AND TRANSFER IN CROP AND ANIMAL PRODUCTION).
ODPG	PUBLIC, SEMI-AUTONOMOUS	ARTIBONITE (Gonaives Plain)	REGIONAL HYDRO-AGRICULTURAL DEVELOPMENT (PUMP IRRIGATON).
ODN MENT.	PUBLIC, SEMI-AUTONOMOUS	NORTH	INTEGRATED REGIONAL DEVELOP-
ODBFA MENT.	PUBLIC, SEMI-AUTONOMOUS	CENTRE	INTEGRATED REGIONAL DEVELOP-
DRI-JER	PUBLIC, SEMI-AUTONOMOUS	GRANDE ANSE	REGIONAL HYDRO-AGRICULTURAL DEVELOPMENT.
DRI-ASILE	PUBLIC, SEMI-AUTONOMOUS	SUD	REGIONAL HYDRO-AGRICULTURAL DEVELOPMENT.
PICV	PUBLIC, SEMI-AUTONOMOUS	CENTRE NORTH-WEST	AGRICULTURAL PRODUCTION (FOOD CROPS).
PREPIPA	PUBLIC, SEMI-AUTONOMOUS	WEST (ARCAHAIE)	REGIONAL HYDRO-AGRICULTURAL DEVELOPMENT.

Source: MARNDR.

7.1.3- Credit institutions

The main rural credit institutions are the Bureau de crédit agricole (BCA) and the Banque nationale de développement agricole et industriel (BNDAI). These two semi-autonomous institutions, whose operations have been seriously reduced, may be considered small development institutions covering only a very limited portion of the rural credit demand. BCA, BNDAI and other formal credit institutions have in the past serviced no more than 6 percent of the 650,000 families in Haiti. This relative ly low rate of farmer assistance will probably be reflected in a grater participation of private voluntary organizations in future credit programs.

The Bureau de Crédit Agricole (BCA)

The BCA was created in 1959 to replace the Bureau de crédit rural supervise through a foreign grant from the United States Overseas Mission. The BCA is a semi-autonomous institution with an administrative council chaired by the Minister of Agriculture.

The BCA has been the government's major agricultural lender to smallholders. In 1987, its portfolio totalled US$7,2 millions in short term loans to groups of 7 to 15 farmers, cultivating between 1 and 5 hectares each. The BCA had developed a sound lending criteria and a rational lending strategy. It did not try to introduce new farming technologies until they had been tested and proved. Its approach was to lend to groups and attempt to enforce social pressure as a repayment mechanism.

However, some of its key policies were rarely followed because of intense politization of the organization. Between 1983 and 1987 the BCA's staff had almost trebled, but there was no discernible progress in increasing operating efficiency. Despite seven years of donor financed in-house technical assistance, institution management failed to implement recovery strategy, cost reduction and income producing strategies for increasing earning assets. Loan defaults exceeded 50 percent of portfolio in September, 1987. In the course of its credit extension to smallholder farmers, the BCA moved to try to finance seasonal production and consumer credit needs of 750,000 households, and further compromised its ability to extend and service smallholder credits.

The Bureau Nationale de Développement Agricole et Industriel (BNDAI)

The BNDAI was created as a credit and input agency in 1984 to replace the Institut de développement agricole et industriel (IDAI) which was funded by the Inter-American Development Bank in 1970 to finance agricultural institutional development.

The focus of the IDAI was to introduce improved technologies and achieve higher production targets in smallholder agriculture. However, the program was criticized for its overambitious introduction of untested production technologies, and for not soliciting the participation of interested farmers in testing and verifying the appropriateness of the technologies before financing them. At the time of the takeover of the IDAI by the BNDAI, its administrative costs exceeded 60 percent of each loan, and the loan default rate was 50 percent.

From the very beginning of its operations, the BNDAI compromised its servicing of small farmers in deference to larger scale farmers. Its policy was to require loan applications to go through four different levels. This process took up to two years for loan processing, for term credits.

As of September 30, 1987, approximately 46 percent of the BNDAI's portfolio was in agricultural loans. Thirteen percent of the portfolio was classified as loans to small farmers, 36 percent as loans to medium scale farmers (averaging about $6,000) and the remaining 51 percent of the portfolio represented loans to larger farmers. These loans ranged from $10,000 to $100,000.

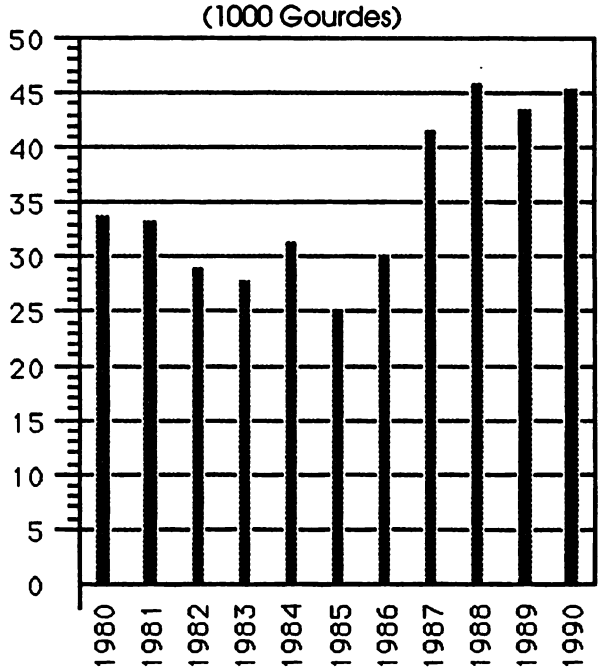
In part because of the lack of visible commitment to small farming, there was large scale default on such loans. Defaults had reached 85 percent by the end of 1985. The combined portfolio of smallholder and large scale agricultural production loans was 78 percent overdue at the end of 1987.

7.1.4 Financial resources

The Ministry of Planning, External Cooperation and Public Function (MPCEFP) has the planning and oversight functions for the Haitian Government budget. Each unit of an administrative organization, including the MARNDR, programs its activities for each fiscal year following the budget-by-program process.

The budgetary structure in the agricultural public sector comprises two kinds of expenditures: operating budget (salaries and operations) and the development budget (investment). The MARNDR has traditionally suffered from underfunding in the operating budget. In the first half of the eighties the operating budget presented a nominal reduction of 25 percent (Figure VII.4). This created a tendency to pay for operating costs (e.g. salaries) with resources from the development budget originally destinated to investment projects. This situation changed during 1986-87 when the MARNDR budget showed a substantial increase in both operating and investment expenditures. The 1986-87 stabilization plan included an expenditure cut of almost 20 percent of the original budget which was partly reallocated to increase the shares of agriculture, health and education. After that, the overall figures of the budget show practically no changes over the 1988-90 period.

FIGURE VII.4
OPERATING BUDGET OF MARNDR
FOR THE PERIOD 1980/1990
(1000 Gourdes)



Source: Table A.16.

The operating and development budgets are financed by both domestic (State revenues) and external resources. As can be seen in Table VII.1, external funding accounted for 73 percent of the budgeted resources in the development budget of the MARNDR for the period 1979-88. When considering actual expenditure, this share fell to 63 percent. This clearly shows that most of the MARNDR's investment resources are made up of project-related funding by external agencies.

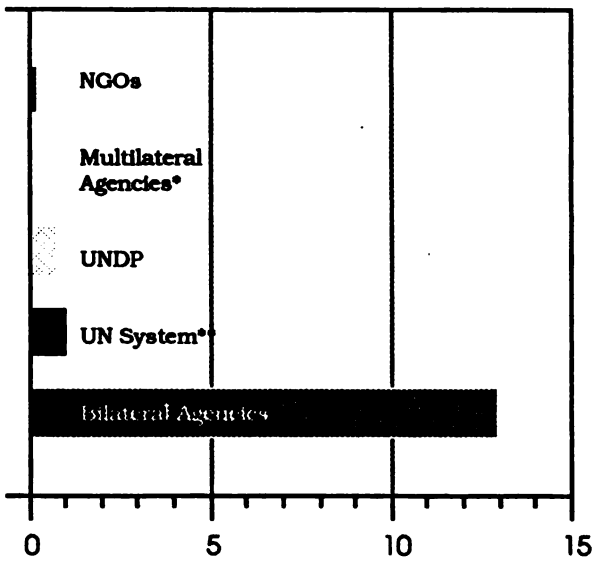
TABLE VII.1
DEVELOPMENT BUDGET AND EXPENDITURE OF MARNDR,
By sources of funding (1979-1988)
(1000 Gourdes)

SOURCES OF FUNDING	AMOUNTS BUDGETED	EXPENDITURES
NATIONAL	53,773	34,694
FOREIGN	145,419	58,167
TOTAL	**199,192**	**92,861**

Source: Hyppolite F. et Andre M. Programme d'Investissement

The main external fund sources of the MARNDR are the bilateral agencies (USAID, CIDA, French Government) which accounted for about 85 percent of the external funding of the MARNDR in 1988 (Figure VII.5). It is well-recognized that there is an

FIGURE VII.5.
DONOR AID TO MARNDR, 1988
(In US$ Millions)



* The corresponding figure is US$ 120,000.00
** Except UNDP
Source: Table A.17

TABLE VII.2
COMPONENTS OF THE OPERATING BUDGET OF MARNDR, 1990 (In 1000 Gourdes)

UNITS	BUDGET LINES SALARIES	OPERATIONS	TOTAL
GENERAL AND ADMINISTRATIVE SERVICES	15,628.0	965.0	16,593.0
CROP PRODUCTION DIVISION	1,794.2	0.0	1,794.2
ANIMAL PRODUCTION DIVISION	1,634.0	0.0	1,634.0
NATURAL RESOURCES DIVISION	5,386.1	0.0	5,386.1
RURAL DEVELOPMENT DIVISION	3,500.3	0.0	3,500.3
AGRICULTURAL DISTRICTS	15,920.4	722.0	16,642.4
TOTAL	**43,863.0**	**1,687.0**	**45,550.0**

Source: MARNDR

uneven relationship between the MARNDR projects financed by the public treasury and the development agency projects financed by foreign assistance. Essentially, the difference is one of a budgetary nature since government projects receive less financing. Among the more serious outcomes of this problem are peasant gravitation toward better financed activities and migration of the best and most talented staff from the Ministry to other projects, regional autonomous institutions and NGOs, which tend to pay higher wages.

Looking at the operating budget allocation in Table VII.2, it can be seen that almost the total disbursement is earmarked for wages, salaries and fringe benefits. The resources allocated to operations represent less than 4 percent of the budget, reflecting the weak financial capacity of the MARNDR to carry out essential service delivery and administrative functions. Indeed, the high share of salaries and wages in total expenditures is a problem for the whole public sector. Such a situation has led some international agencies, particularly the IMF and the World Bank, to put pressure on the government to reduce personnel costs as a loan conditionality.

7.1.5 Human resources

According to the Ministry of Planning, External Cooperation and Public Function (MPCEFP), the number of public employees was 45,000 in 1985, an estimate lower than the 57,000 provided by the World Bank (1987). The lack on agreement of these estimates reflects the little central control and systematic administration of public employees in Haiti (Brinkerhoff and Goldsmith, 1987).

A key problem of public agricultural institutions is the poorly qualified personnel and poor personnel performance. High-level staff has changed frequently and few people view employment in the MARNDR as a permanent career path (World Bank-SSA, 1985, p.iv). In light of this diagnosis, training and skill development of public employees has been a major objective of the Haitian Government. In an attempt to develop professional skills in the public sector, the government is about to establish career paths,

salary scales and in-service training. Public employee training has also been a common component of external donors' projects through the offering of periodic in-country courses. External support has also included assistance in setting up two training institutions (Centre de techniques de planification et d'économie appliquée and Centre de formation et de perfectionnment des agents de la fonction publique) attached to the MPCEFP.

The MARNDR has 2,347 employees representing approximately 5 percent of the total number of public employees. Twenty percent of the personnel working for the MARNDR have a university degree and less than ten percent do not have at least a primary school certificate (TableVII.3). With regard to geographic distribution, about half of all personnel work at MARNDR's headquarters in Damien. The high proportion of personnel located in the headquarters illustrates the administrative staff centralization of the MARNDR.

In general terms, the personnel administration agenda of the MARNDR has included the need for systematic administrative changes with the purpose of improving performance of the agricultural public institutions. It has been reported that the MARNDR has had trouble retaining more qualified personnel, particularly, agronomists trained at the Faculté d'agronomie et de médicine vétérinaire due to the lack of clearly defined functions and of proper salaries. In this sense, concerns have focused on the rationalization of personnel administration with emphasis on hiring procedures, job classification, wage scales and training and skill development.

7.2. Agricultural Non-Governmental Organizations (NGOs)

In the last two decades the activities of the NGOs were reinforced mainly by international donor agencies. The weak public sector capacity led most external agencies to work directly with non-governmental organizations deemed more efficient and easier to supervise. Alternatively, some external agencies have developed their activities by setting up semi-autonomous units focused on specific projects or regions. In 1987, the World Bank estimated that there were at least nine donor-funded units integrated into rural development projects.

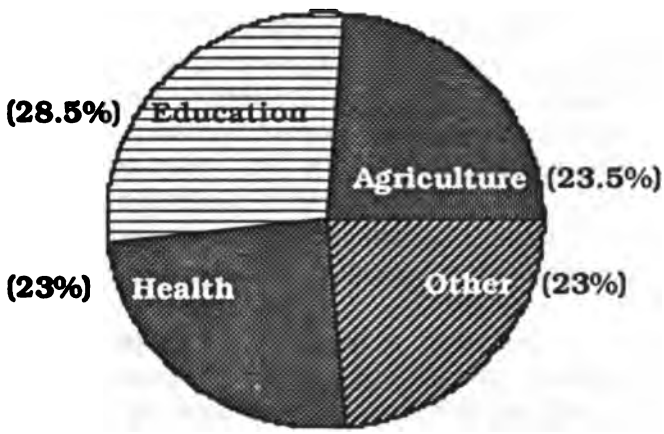
TABLE VII.3
HUMAN RESOURCE CATEGORIES AND DISTRIBUTION WITHIN THE MINISTRY OF AGRICULTURE

CATEGORIES OF PERSONNEL	GEOGRAPHIC DISTRIBUTION		TOTAL
	HEADQUARTERS	REGIONS	
UNIVERSITY GRADUATES	234.0	223.0	457.0
SECONDARY SCHOOL	50.0	34.0	84.0
3 YEARS OF SECONDARY SCHOOL	352.0	395.0	747.0
PRIMARY SCHOOL CERTIFICATE	434.0	409.0	843.0
UNCLASSIFIED	94.0	122.0	216.0
TOTAL	**1,164.0**	**1,183.0**	**2,347.0**

Source: MARNDR. Résultats des travaux de la commission AD HOC sur le recensement et la formation

While the government has complained about the donors' strategy, the number of NGOs has increased to approximately 750 of which only 149 are (to our knowledge) officially registered at the Coordination Unit for Non-Governmental Organizations (UCONG)in the Ministry of External PlanningExternal Cooperation and Public Functions (MPCEFP). The sectoral distribution of the officially registered NGOs involved in sectoral development is presented in Figure VII.6. More than 75 percent of the officially registered NGOs, are concetrated in education, health and agriculture.

FIGURE VII. 6
SECTORAL SHARE OF OFFICIALLY REGISTERED NGOs IN HAITI



Source: Table A.18.

Approximately 23 percent of the total number of NGOs operating in the country work in the agricultural sector. In terms of geographic location, the agricultural NGOs are well-distributed throughout the nine administrative department (Table VII.4). The main activities of the agricultural NGOs are related to technology development and transfer, small animal raising and reforestation.

In the field of reforestation, the Pan American Development Foundation (PADF) is developing its activities country-wide. In 1989, about 85 NGOs partnering with PADF were able to distribute 6,9 millions of multipurpose seedlings to 50,000 farmers for planting. This is of particular importance in Haiti where the productive resource base is been depleted at alarming rates (40,000,000 trees per year), due to deforestation and erosion.

TABLE VII.4
GEOGRAPHIC DISTRIBUTION OF NGOs (*)

DEPARTMENT	NUMBER OF NGOs			
	EDUC.	AGRIC.	HEALTH	SOCIAL WELFARE
ARTIBONITE	28	25	24	23
CENTRE	17	14	13	12
GRANDE ANSE	12	10	14	9
OUEST	44	30	40	32
NORD EST	13	13	8	10
NORD	23	20	21	20
NORD OUEST	18	17	14	11
SUD	15	14	13	15
SUD EST	13	10	13	11
TOTAL	**183**	**153**	**160**	**143**

Source: Unite de Coordination des ONGs. MPCEFP. 1991.
(*) The above information includes 639 NGOs of a total guess estimated of 750 organizations.

In the last years, NGOs have became more active in agricultural sector activities as an indirect consequence of the cut-off of foreign assistance to the public sector. It is estimated that foreign assistance to MARNDR was reduced by approximately 75 percent in the 1988-89 fiscal year. This withdrawal of external support due to the political and institutional crisis in 1987, resulted in an increase in foreign financing of NGOs' projects.

This process of development assistance was practically the only way to channel direct aid to Haiti. Consequently, the government's development projects lost a main source of financing while the policy of working with NGOs was reinforced by external donors. This increased participation of NGOs in the Haitian agriculture is reflected in the volume of financial and human resources mobilized as well as their technical an geographic expansion. Data available for a set of 16 NGOs indicate that during the

fiscal year 1988-89, approximately US$ 36 million were spent in support of agriculture-related programs (Table VII.5). This represents five times the MARNDR's expenditures during the same fiscal year. At the same time, the number of human resources mobilized by these 16 NGOs was slightly greater than in MARNDR. Personnel distribution of these 16 NGOs indicates a high share of financial resources allocated to operations and a great presence in the field constrasting to the MARNDR.

TABLE VII.5
FINANCIAL AND HUMAN RESOURCES
IN A SET OF 16 NGOs AS COMPARED TO
MARNDR 1988/89

RESOURCES	SET OF 16 NGOs 1/	MARNDR 2/
HUMAN RESOURCES		
TOTAL	2,620	2,347
% IN THE FIELD	87	50
FINANCIAL RESOURCES		
TOTAL (000 US$)	35,526	6,507 *
OPERATIONS	85	4

Sources: 1/ Unité de coordination des ONGs. MPCEFP. 1991.
2/ Hypolite. F. and André, M.: Programme d' investissement de MARNDR. MARNDR, 1990.
* At the rate of 1US$ = 7 Gdes.

Although no sufficient data are yet available to evaluate the impact of NGO projects in the country, the target populations seem to have a positive attitude towards NGO-implemented activities. In spite of certain achievement, greater NGO participation has been limited by two factors. First, an unclear national development policy concerning the role to be played by the NGOs. Second, lack of coordination among different NGO actions in the field. A positive step has been undertaken to alliviate the latter limitation through the creation of both the Haitian Association of Voluntary Agencies (HAVA), and the Coordination Unit for Non-Governamental organizations (UCONG) in the Ministry of Planning, which coordinates NGO activities.

7.3. Task distribution between NGOs and government

The government concerns about external donors's policy of working with NGOs has prompted a debate about the necessary allocation of tasks between NGOs and government in Haiti. A recent USAID report (USAID, 1989) has suggested the following as areas which could be better undertaken by the government:

a) development and maintenance of basic infrastructure facilities, including the building and repair of roads, bridges, energy facilities, large irrigation projects and other public works;

b) agricultural research and extension. Although it is recognized that NGOs are actively, and in some cases successfully, engaged in extension, the report states that "with no overall development plan, no common agricultural policy, and little administrative coordination there exists the potential for overlap and duplication of coverage"(1989,p23);

c) externality cases when a person or a group of persons is not accountable to society for the results of its actions;

d) high risk investments, as for example, crop diversification efforts, which are too risky and the potential benefits too uncertain. As NGOs are able to choose their projects they are likely to select those activities which have the greatest probability of success;

e) coordination or planning of national economic investment. NGOs often operate as a disparate group of entities and do not have the resources or ability to undertake such a task.

The report suggests that work in these five areas could be carried out more appropriately by the government than NGOs. Although the report emphasizes that the proposal does not mean the government has

performed these functions well in the past, it does conclude that donors should not avoid working with the government in the future in those areas described above.

7.4. Rural organizations

Haitian agriculture incorporates a set of formal and informal private organizations whose development has been stimulated by government and donor agencies, i.e., bilateral agencies and NGOs. The principles of such rural organizations are well defined in the new country Constitution.

7.4.1. Local organizations

Among the most important local organizations in the rural areas are the local council (conseils d'action communautaire). These councils are based on voluntary community participation rather than on official conscription. However, as Smucker states, "many people take out nominal membership for their own protection on the ground that community councils are official government policy" (Smucker, 1986, p.109).

Despite their political relevance for the government, the councils have no formal power. These councils have assumed an important role in dealing with outside sources of services and inputs, especially where donor organizations are concerned. This kind of community participation has been achieved mainly in some NGO projects.

7.4.2. Cooperatives

Cooperatives first appeared on the Haitian agricultural scene at the end of the thirties. Initially they were organized with support of the government, which sought a means of interacting with community movements. The indigenous and local-level private voluntary organizations were the pervasive feature of the community movements and were used as a basis for development of cooperatives.

Later the cooperative movement started to receive increasing support from NGOs and bilateral agencies, particularly USAID and CIDA. In many of these donor projects and programs, building upon traditional cooperatives institutions was an important component of the rural development strategy. Nevertheless, as recent USAID report states, this approach may be considered only marginally succesfull since "the majority of the cooperatives-like groupings that have been organized by NGOs and bilateral donors have stayed at the pre-cooperative stage, either because of inability to take the next organizational steps for reasons internal to the groups themselves or frequently, because of government's refusal to accredit the groups as full-fledged cooperatives" (p. 202). In fact, low administrative capacity, scarce financial resources and technical assistance dependency have been the main impediments to the cooperative movement in its attempt to play a growing independent role in Haitian agriculture. The available information regarding the cooperative system is not accurate because many cooperative organizations are not recognized as full-fledged cooperatives by the official institutions. Delatour et al have identified 22 officially recognized cooperatives as follows: 12 in coffee, 6 in caisses populaires, 1 in housing, 1 in handicrafts, 1 in milk collection and 1 "Union".

STATISTICAL APPENDIX

TABLE A.1: HAITI, REAL GROSS DOMESTIC PRODUCT BY KIND OF ECONOMIC ACTIVITY, 1980-89.

KIND OF ACTIVITY	YEARS										Average annual rate of growth		
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989*	1960 1970	1971 1980	1980 1989
	Millions of dollars of 1988										Percent		
AGRICULTURE	752	741	710	684	707	712	729	731	721	713	0.80	1.50	-0.60
MINING	29	25	31	2	2	3	2	2	2	2	5.00	-0.70	-25.10
MANUFACTURING	426	374	367	388	365	354	344	342	333	326	0.50	8.40	-2.90
CONSTRUCTION	126	130	117	125	127	143	134	137	139	143	1.90	12.60	1.50
ELETRICITY, GAS AND WATER	16	17	18	18	19	20	21	21	24	24	3.50	13.80	5.00
COMMERCE	436	408	391	409	394	399	389	392	388	388	-0.50	6.20	-1.30
TRANSPORT AND COMMUNICATION	43	45	42	46	40	37	38	43	45	47	-2.10	5.30	1.00
FINANCIAL SERVICES	217	220	211	229	225	213	224	224	226	231	1.40	9.00	0.70
GOVERNMENT SERVICES	65	73	62	70	82	85	88	88	87	86	2.20	-0.60	3.20
OTHER SERVICES	225	236	240	235	251	253	261	263	245	216	2.40	5.50	-0.50
TOTAL: REAL GROSS DOM. PRODUCT**	2334	2267	2190	2206	2213	2219	2231	2244	2210	2177	0.80	4.70	-0.80
PER CAPITA GDP (US$ 1988)	431	412	390	386	381	375	370	365	353	341	-1.20	2.80	-2.60

Notes: * Preliminary figures.
** Due to rounding error the sum of the collumns may not correspond to total GDP.
SOURCE: Inter-American Development Bank, Economic and Social Progress in Latin America, 1990 Report.

TABLE A.2 : HAITI, GROWTH RATE OF REAL GDP BY KIND OF ECONOMIC ACITIVITY, 1981-89.

KIND OF ECONOMIC ACTIVITY	1981	1982	1983	1984	1985	1986	1987	1988	1989
AGRICULTURE	-1.46	-4.18	-3.66	3.36	0.71	2.39	0.27	-1.37	-1.11
MINING	-13.79	24.00	-93.55	0.00	50.00	-33.33	0.00	0.00	0.00
MANUFACTURING	-12.21	-1.87	5.72	-5.93	-3.01	-2.82	-0.58	-2.63	-2.10
CONSTRUCTION	3.17	-10.00	6.84	1.60	12.60	-6.29	2.24	1.46	2.88
ELETRICITY, GAS AND WATER	6.25	5.88	0.00	5.56	5.26	5.00	0.00	14.29	0.00
COMMERCE	-6.42	-4.17	4.60	-3.67	1.27	-2.51	0.77	-1.02	0.00
TRANSPORT AND COMMUNICATION	4.65	-6.67	9.52	-13.04	-7.50	2.70	13.16	4.65	4.44
FINANCIAL SERVICES	1.38	-4.09	8.53	-1.75	-5.33	5.16	0.00	0.89	2.21
GOVERNMENT SERVICES	12.31	-15.07	12.90	17.14	3.66	3.53	0.00	-1.14	-1.15
OTHER SERVICES	4.89	1.69	-2.08	6.81	0.80	3.16	0.77	-6.84	-11.84
TOTAL: REAL GROSS DOM. PRODUCT	-2.87	-3.40	0.73	0.32	0.27	0.54	0.58	-1.52	-1.49
PER CAPITA GDP (US$ 1988)	-4.41	-5.34	-1.03	-1.30	-1.57	-1.33	-1.35	-3.29	-3.40

SOURCE: Calculated from Table A.1 .

TABLE A.3 : HAITI, BALANCE OF PAYMENTS, 1980-89.

	Y E A R S									
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
EXPORT OF GOODS	215.1	147.2	173.8	185.5	211.6	227.5	196	215.7	157	155
IMPORT OF GOODS	318.1	350.7	296.2	323.9	333	351.7	311.6	319.5	285.4	288.9
MERCHANDISE BALANCE	-103	-203.5	-122.4	-138.4	-121.4	-124.2	-115.6	-103.8	-128.4	-133.9
SERVICE BALANCE	-82	-73.1	-81	-77.5	-96.8	-115.1	-83.2	-99.5	-114.3	-118.9
UNREQUITED TRANSFERS	158.1	196	156	153	165.6	196.2	210.8	234.2	255.1	247.9
CURRENT ACCOUNT BALANCE	-96.7	-140.9	-93.9	-106.1	-97	-91.3	-42.9	-27.5	-48.6	-68.7
NET PRIVATE FOREIGN INVESTMENT	13	8.1	7	8.3	4.4	5	4.9	4.8	10.2	n.a
NET PRIVATE PORTFOLIO INVESTMENT	0	0	0	0	0	0	0	0	0	n.a
OTHER NET LONG-TERM PRIVATE CAPITAL	22	72.9	28.5	43.2	18.6	24.5	35.5	35.8	34.5	n.a
OTHER NET SHORT-TERM PRIVATE CAPITAL	0	0	0	0	0	0	0	0	0	n.a
NET PRIVATE CAPITAL	35	81	35.5	51.5	23	29.5	40.4	40.6	44.7	0
NET LONG-TERM FOREIGN CAPITAL: GOV.SECTOR	45.2	27.1	47.6	33.1	66.1	25.4	-0.1	21.7	4.7	n.a
NET SHORT-TERM FOREIGN CAPITAL: GOV.SECTOR	-1.7	0	0	0.5	10.8	16.9	24	6.2	25.5	n.a
NET FOREIGN CAPITAL: GOV.SECTOR	43.5	27.1	47.6	33.6	76.9	42.3	23.9	27.9	30.2	0
NET BALANCE OF EXTERNAL TRANSACTIONS BY THE MONETARY SECTOR	-2.6	-1.3	5.9	5.5	12.2	-14.8	-10.7	-9.2	5.1	n.a
NET BALANCE OF CAPITAL ACCOUNT	75.9	106.8	89	90.6	112.1	57	53.6	59.3	80	95.8
ERRORS AND OMISSIONS	-16.3	-2.1	-13.9	-12.8	-33.8	39.8	14	-26	-5.8	-16
CHANGE IN NET INTERNATIONAL RESERVES (- = INCREASE)	37	36.3	19	28.3	18.8	-5.3	-24.9	-5.8	-25.5	-11.1
OVERALL BALANCE OF PAYMENT	-20.8	-34.1	-4.9	-15.5	15.1	-34.3	10.7	31.8	31.4	27.1

SOURCE: Inter-American Development Bank, Economic and Social Progress in Latin America, 1990 Report.

TABLE A.4: HAITI, CENTRAL GOVERNMENT FINANCES, 1980-1989.

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
I. CURRENT REVENUES (1)	9.5	10.1	10.8	11.5	11.7	12.8	12	11.9	11.2	10.4
A. TAX REVENUES (2)	92.7	86.6	88.2	88.6	84.7	87.9	95.1	95.8	96.7	95.6
DIRECT TAXES (2)	14.5	17.2	16.9	15	14.7	13.3	12.5	11.4	13	14.3
Income taxes (2)	12.9	15.6	15.3	13.7	13.3	12.1	11.2	9.9	11.3	12.4
Property taxes (2)	1.5	1.6	1.6	1.3	1.4	1.2	1.3	1.5	1.6	1.8
INDIRECT TAXES (2)	78.2	69.4	71.3	73.6	70	74.6	82.6	84.4	83.7	81.3
Production & sales taxes (2)	10.2	15.5	18.8	27.2	27.7	34	35.1	35.1	37.8	38.5
International trade taxes (2)	59.4	37.5	31.5	37.2	29.5	23.9	23.2	17.6	14.7	17.5
B. NON-TAX REVENUES (2)	7.3	13.4	11.8	11.4	15.3	12.1	4.9	4.2	3.3	4.4
II. TOTAL EXPENDITURES (1)	15.2	18.4	24.8	23.4	23.1	20.1	18.8	18.9	14.7	12.6
A. CURRENT EXPENDITURES (3)	67.6	83.8	87.4	88.3	89.8	89.6	84.7	87.3	101.5	102.4
Purchase of goods & services (3)	59.2	33.4	28.1	27.5	32.6	38.5	28.2	44.8	61.7	69
Interest payments (3)	2.5	3.3	2.8	3.8	5.9	n.	n.	n.	n.	n.
Current transfers & subsidies (3)	5.9	47.2	56.5	57	51.4	51.1	56.6	42.5	39.8	33.4
B. CAPITAL EXPENDITURES (3)	32.4	16.2	12.6	11.7	10.2	10.4	8.7	10.8	9.5	15.2
Total investment (3)	n.	n.	n.	n.	n.	n.	n.	n.	n.	n.
Financial investment & net lending (3)	n.	n.	n.	n.	n.	0	6.6	1.9	-11.1	-17.7
III. CURRENT SAVINGS (1)	-0.8	-5.4	-10.9	-9.1	-9.1	-5.2	-3.9	-4.6	-3.8	-2.5
IV. OVERALL SURPLUS OR DEFICIT (1)	-5.7	-6.2	-6	-4	-7.7	-2.2	-3.4	-1.8	-2.2	-2.1
V. DOMESTIC BORROWING (1)	2.9	4.6	2.8	1.6	4.5	1.8	1.3	0.5	1.4	1.7
VI. FOREIGN BORROWING (1)	2.6	1.4	2.3	1.9	1.8	0.3	2.1	1.2	0.8	0.4

Notes: (1) = Percentage of GDP
(2) = Percentage of current revenues
(3) = Percentage of total expenditures

SOURCE: Inter-American Development Bank, Economic and Social Progress in Latin America, 1990 Report.

TABLE A.5
HAITI, OCCUPATION OF LAND BY USE CATEGORY
(SQUARE KILOMETERS)

TYPE OF LAND USE	NORTH	TRANSVERSALE	WEST	SOUTH	HAITI
SPECIALIZED CROPS	371.1	605.3	318.9	413.4	1,708.7
RICE	42.8	316.0	46.8	63.6	469.2
SUGARCANE	126.7		144.5	81.7	352.9
ANNUAL IRRIGATED	48.4	265.6	28.0	162.4	504.4
SISAL	153.2	22.0	56.1	17.6	248.9
					0.0
TREE CROPS DOMINANT	413.0	725.9	460.9	396.3	1,996.1
FOOD CROPS IN (c)	267.5	168.4	281.5	183.5	900.9
ASSOCIATION	145.5	557.5	179.4	212.8	1,095.2
					0.0
TREE CROPS SPARSE	846.7	1,728.6	1,894.8	861.0	5,331.1
ASSOCIATED FOOD	553.1	1,462.9	577.9	535.7	3,129.6
CROPS DENSE (c)	293.6	265.7	516.9	325.3	1,401.5
					0.0
TOTAL AGRICULTURAL	3,261.6	6,117.9	4,505.7	3,253.3	17,138.5

SOURCE: USAID, 1987.
(c) Indicates coffee predominant.

TABLE A.6
AVERAGE YIELDS, HECTAREAGE AND PRODUCTION
OF THE PRINCIPAL CROPS IN HAITI
1980 TO 1986

CROP	AREA (Ha)	PRODUCTION (MT)	AVERAGE YIELD (MT/Ha)
MAIZE	231,250	185,000	0.8
SORGHUM	156,250	125,000	0.8
RICE	59,250	136,000	2.3
BEANS	89,655	52,000	0.6
PEANUTS	45,355	34,000	0.8
BANANA	80,645	500,000	0.7
SWEET POTATOES	61,905	260,000	0.5
YAMS	22,000	110,000	5.0
TARO	8,665	39,000	4.5
CASSAVA	28,000	112,000	4.0
SUGAR CANE	114,000	5,700,000	50.0
COFFEE	132,000	35,900	0.3
COCOA	10,400	2,600	0.3
COTTON	12,445	5,600	0.5
TOTAL	1,051,820		

SOURCE: World Bank, 1987.

TABLE A.7
NUTRITIONAL SURVEY* - 1978

DEPARTMENTS	L O C A T I O N	RURAL	URBAN	NUTRITIONAL STATUS			
				NORMAL	1st DEGREE	2nd DEGREE	3rd DEGREE
NORTH	CAP-HAITIEN (LA FAUSSETTE)		U	1.9	29.8	41.3	24.1
	BAS QUARTIER	R		8.8	28.8	31.1	22.2
NORTHEAST	PORT-LIBERTE	R		3.8	23.0	46.1	26.9
NORTHWEST	PORT-DE-PAIX		U	15.3	31.6	40.8	11.2
	BASSIN BLEU	R		16.2	34.8	25.5	23.2
	BOMBARDOPOLIS	R		9.1	27.2	52.2	11.3
	BAIE DE HENNE	R		8.2	41.6	45.8	4.1
ARTIBONITE	GONAIVES		U	12.9	29.4	43.5	14.1
	GROSS-MORNE	R		4.5	45.4	27.2	13.6
	GROSS-MORNE	R		3.1	46.8	46.8	3.1
	MARMELADE	R		11.3	36.3	36.3	15.9
	PLATON	R		0.0	11.1	40.7	33.3
CENTER	SAUT D'EAU	R		23.1	38.4	15.3	15.3
	LA SALLE	R		4.7	23.5	44.1	17.6
WEST	PORT-AU-PRINCE		U	14.2	14.2	46.8	21.8
	FONDS-PARISIENE	R		30.1	40.1	13.3	16.6
	VARREUX	R		22.8	51.4	8.5	17.1
	TROU CHOUCHOU	R		13.3	36.6	36.6	13.3
SOUTHEAST	BAINET	R		29.7	32.4	35.1	5.4
GRANDE-ANSE	JEREMIE		U	18.5	22.2	40.7	14.8
	FOND-ROUGE TORBOCK	R		15.3	26.9	42.3	11.5
	MORON	R		12.8	23.1	46.1	17.9
SOUTH	CAYES		U	14.6	26.6	32.1	21.3
	ROCHE A BATEAU	R		14.2	33.3	47.6	4.7
	BEAUCLOS (ROCHE A BATEAU)	R		8.1	40.5	28.8	13.5
T O T A L		19	6	17.8	28.9	35.6	15.7

SOURCE: SEP/UPAN, 1980, Toureau and others, 1975.
(*) Sample of 1,542 children.

TABLE A.8
HAITI - IMPORT OF CHEMICAL AND BIOLOGICAL INPUTS, 1972-82

	1972	1973	1974	77-78	78-79	79-80	80-81	81-82
FERTILIZER (MT)	1,324.0	2,926.0	3,338.0	2,164.0	7,586.0	3,708.0	8,363.0	5,761.0
PESTICIDES (KG)	116.8	169.0	183.0	528.6	460.9	649.2	735.3	1,054.2
SEEDS (MT)	37.9	297.7	44.8	116.0	507.7	94.8	478.9	340.1

SOURCE: World Bank Agricultural Sector Assessment November 1987.
NOTE : Seeds Are: Corn, Rice, Millet, Sorghum and Legumes.

TABLE A.9
HAITI - REAL AVERAGE RETAIL PRICES
OF SELECTED FOOD PRODUCTS, 1979-88
(Gourdes/Lb; 1985 Prices)

YEARS	RICE	MAIZE	FLOUR	SUGAR
1979	3.08	0.99	1.82	2.02
1980	2.98	1.11	1.59	2.13
1981	3.31	1.43	1.70	2.47
1982	2.92	0.88	1.61	2.39
1983	2.83	1.30	1.52	2.23
1984	4.42	1.44	1.48	2.08
1985	2.60	1.30	1.48	1.90
1986	2.71	1.55	1.38	1.82
1987	1.97	1.31	1.37	1.98
1988	2.30	1.25	1.30	1.90

SOURCE: Haitian Institute of Statistics.

TABLE A.10
HAITI-COFFEE EXPORT PRICE AND DISTRIBUTION OF REVENUE, 1979-89
In US$ 60 Kg/bag

	70	75	80	82	84	86	88	89
EXPORT PRICE (1)	56.40	62.40	218.50	147.70	177.90	208.10	142.60	153.90
PRODUCER PRICE (2)	27.60	25.00	109.20	74.30	99.10	132.10	103.20	104.40
INTERM.MARGIN (3)	12.40	21.20	53.40	36.00	35.20	35.70	39.40	49.50
TAXES (4)	16.40	16.20	55.90	37.40	43.60	40.20	0.00	0.00

SOURCE: Haitian Institute of Statistics.
NOTE : (1) = (2) + (3) + (4)

TABLE A.11
FUNCTIONS, LOCALIZATION AND COVERAGE OF THE MARS's INSTITUTIONS

INSTITUTIONS	MAIN FUNCTIONS IN TECHNOLOGY DEVELOPMENT AND TRANSFER	COVERAGE		SOCIAL
		GEOGRAPHICAL	TECHNICAL	
CRDA & EXTENSION SECTION OF MARNDR	COORDINATION, AT NATIONAL LEVEL, OF ACTIVITIES RELATED TO TECHNOLOGY GENERATION AND TRANSFER.	SOUTH -LEVY -SALAGNAC SOUTH EAST -JACMEL VALLEY -FONDS DES NEGRES WEST -CUL DE SAC PLAIN	MIZE, BEANS, VEGETABLES. BEANS. POTATOES, BEANS. BEANS.	SMALL PRODUCERS.
FAMV	AGRICULTURAL TEACHING AND RESEARCH.	WEST -CUL DE SAC PLAIN	FIELD BEANS, POTATOES, SWEET POTATOES.	SMALL PRODUCERS.
ODVA	TECHNOLOGY VALIDATION AND TRANSFER FOR THE RICE CROP.	ARTIBONITE -ARTIBONITE VALLEY	RICE, MAIZE, BEANS, VEGETABLES, SMALL ANIMALS.	SMALL AND MEDIUM PRODUCERS.
ODPG	TECHNOLOGY VALIDATION AND TRANSFER.	ARTIBONITE -GONAIVES PLAIN	GRAIN, LEGUMES ROOTS AND TUBERS VEGETABLES.	SMALL PRODUCERS.
DRI-ASILE	TECHNOLOGY VALIDATION AND TRANSFER.	SOUTH	MAIZE, GRAIN, LEGUMES ROOTS AND TUBERS VEGETABLES.	SMALL PRODUCERS.
ODN	TECHNOLOGY VALIDATION AND TRANSFER.	NORTH	MAIZE, BEANS, COFFEE, CACAO, SUGAR CANE, ROOTS AND TUBERS.	SMALL PRODUCERS.

SOURCE: MARNDR.

Table A.12. FOREIGN ASSISTANCE PROJECTS UNDER CONSIDERATION
(May 1991)

Agencies	Projects	Period of Implem.	External funding US$	Coverage
USAID	- Targeted watershed mgt	1992-95	2,435,000	N
	- AIDS control		6,300,000	N
	- Tropical fruit production marketing		5,000,000	N
	- Informal sector developmentt		6,000,000	N
IDB	- Irrigation	1991-96	15,000,000	Z
	- Rivière Blanche roads		20,000,000	Z
	- POCHEP III/water supply		15,000,000	N
	- Rural health		20,000,000	Z
	- Rural roads		20,000,000	N
	- Small projects		1,250,000	Z
IBRD	- Agroforestry II	1992-99	26,000,000	N
	- Rural infrastructure	1991-96		
	- Energy			
JAPAN	- Rural health			N
	- Irrigation			Z
	- Nutrition			
	- Agri. development funds			
FAC	- Inte. development project	1991-98	8,000,000	Z
	- Salagnac farming studies	1991-96		N
	- Rural development			N
GTZ	- St. Raphael watershed management	1991-95	in negotiation	Z
	- Institutional support		in negotiation	N
	- Energy support		3,000,000	N
	- Bridges construction		n.a.	N
CIDA	- Community forests	1991-95	4,900,000	Z
	- Assistance to cooperation		n.a.	N
	- CECI/CARICE		n.a.	Z
	- St. Michel l' Attalaye		n.a.	Z
TAIWAN	- Rural development		in negotiation	N
EEC	- STRABEX and road infrastructure		6,000,000	Z
	- Roads network		in negotiation	N

N= National Z= Zonal Source: IICA/Haiti.
Source: Constructed by IICA Office in Haiti based on information provided by the agencies.

TABLE A.13
IMMUNIZATION COVERAGE OF CHILDREN UNDER 1 YEAR
HAITI,1982-88

YEAR	DPT		POLIO		BCG		MEASLES	
	3rd Dose	%	3rd Dose	%	Doses	%	Doses	%
1982	2,241	12.6	11,075	6.3	101,232	57.5		
1983	15,765	8.8	15,518	6.6	109,657	61.1		
1984	23,327	12.8	20,197	11	122,580	67		
1985	43,083	19.4	40,950	18.5	165,826	74.8		
1986	49,108	21.8	56,909	25.2	140,681	62.3		
1987	68,129	29.6	67,898	29.5	91,224	39.6		
1988	109,829	54.5	109,125	54	97,994	48.5	126,780	62.8

SOURCE: Pan American Health Organization,1990.

TABLE A.14
HEALTH ESTABLISHMENTS BY TYPE IN 1987, AND NUMBER OF BEDS AND
RATIO PER 1000 POPULATION IN 1985, BY SANITARY REGION, HAITI,1987

	TOTAL	NORTH	TRANSVERSE	WEST	SOUTH
HOSPITALS	49	2	6	36	5
HEALTH CENTER WITH BEDS	50	13	18	6	13
HEALTH CENTERS WITHOUT BEDS	88	10	27	46	5
DISPENSARIES	216	44	71	41	63
TOTAL No OF ESTABLISHMENTS	406	69	122	129	86
TOTAL No OF BEDS	4,956	665	904	2,779	608
BEDS PER 10,000 INHABITANTS	0.94	0.85	0.63	1.36	0.6

SOURCE: Pan American Health Organization,1990.

TABLE A.15
AGGREGATE HEALTH EXPENDITURES, PUBLIC, PRIVATE NGOs
AND PRIVATE HOUSEHOLDS, 1981-97

SOURCE OF FINANCE	1981	1983	1986	1987
GOV. OF HAITI(INCLUDING GRANTS AND CONCESSIONARY LOANS FROM FOREIGN DONORS)	23	34	37	45
PRIVATE AND VOLUNTARY ORGANIZATIONS	6	16	26	30
PRIVATE HOUSEHOLDS, DIRECT PAYMENTS TO PRIVATE PROVIDERS	43	51	53	53
TOTAL HEALTH EXPENDITURES	72	101	116	128
TOTAL HEALTH EXPENDITURES PER CAPITA, US$	14.4	19.8	22.3	23.2

SOURCE: The World Bank,1989.

TABLE A.16
OPERATING BUDGET OF MARNDR
FOR THE PERIOD 1980/1990
(1000 GOURDES)

FISCAL YEAR	OPERATING BUDGET
1980	33,966
1981	33,382
1982	29,168
1983	28,000
1984	31,475
1985	25,365
1986	30,365
1987	41,600
1988	46,000
1989	43,700
1990	45,550

SOURCE: Hyppolite F. et Andre M. Programme d'Investissement du MARNDR. 1990

TABLE A.17
DONOR AID TO MARNDR, 1988
(IN US$ MILLIONS)

SOURCE OF FUNDING	AMOUNT	%
1. BILATERAL AGENCIES	12.923	85.6
2. UN SYSTEM (EXCEPT UNDP)	1.043	6.9
3. UNDP	0.738	4.9
4. MULTILATERAL AGENCIES (EXCEPT UN)	0.120	0.8
5. NGOs	0.265	1.8
TOTAL	15.089	100.0

SOURCE: UNDP Cooperation on Development, Haiti, Report 1988.

TABLE A.18
SECTORAL SHARE OF OFFICIALLY REGISTERED NGOs IN HAITI

SECTOR	NO. OF NGOs	% OF TOTAL
AGRICULTURE	35	23.5
EDUCATION	42	28.5
HEALTH	37	25.0
OTHER SECTIONS	35	23.0
TOTAL	149	100.0

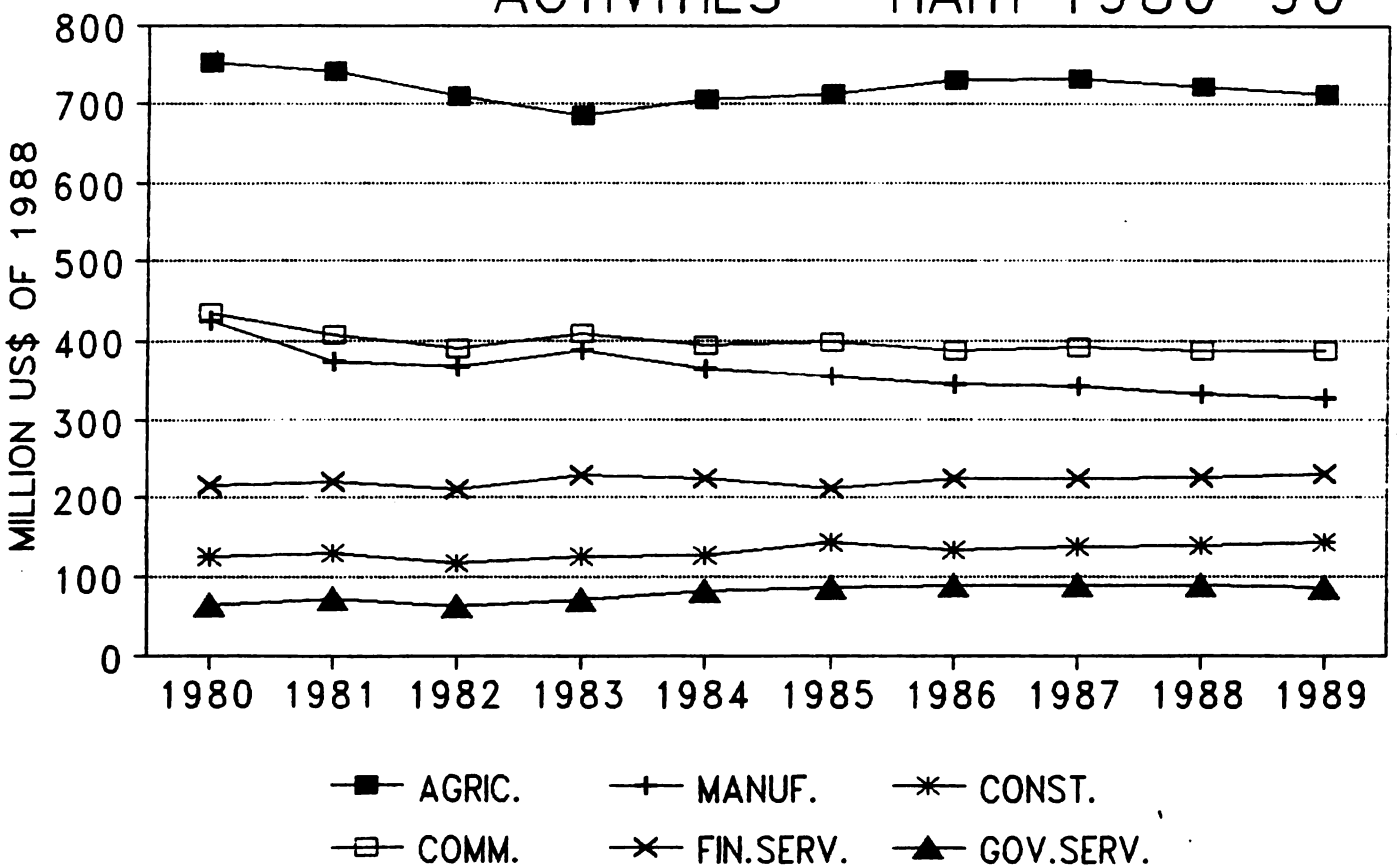
SOURCE: Unite de Coordination des ONGs. MPCEFP. 1991.

TABLE A.19
16 SELECTED AGRICULTURAL NGOS

NGO	SOURCE OF FUNDS
CHRISTIAN CHILDREN FUND	SPONSORS
CATHOLIC RELIEF SERVICE	CRS/USCC, USAID/WASH PL480 T.O. OWN.
N.E.W. MISSIONS	USAID-PROFAMIL PL480 T II
CRWRC	CRWCR/CANADA CRWCR/USA CRWCR/WORLD COMPASSION
MBCH	MBCH/USA MBCH/CANADA NVI-PADF-USAID COMPASSION/CAN MEMBERS OPS
CBP	ONDES PUBLIC HEALTH MINISTRY FINANCE MINISTRY CHINA
MCC	MCC PENSYLVA.
MVI	MVI
EGLISE EVANGELIQUE EBENEZER	LADIES IN ACT. CCFC MEMBERS
AIDE SUISSE A L'ACTION COMMUNAUTAIRE	ASACH/SUISSE FGC/SUISSE MEMBERS
MBLIH	EXTERNAL
CECI	ACDI
WHFC	MHFC/USA PROFAMIL
ADRA	USAID-PROFAMIL PL480 T II
EGLISE DU NAZAREENS	EGLISE DU NAZAREEN INTERNATIONAL TEAR FUND

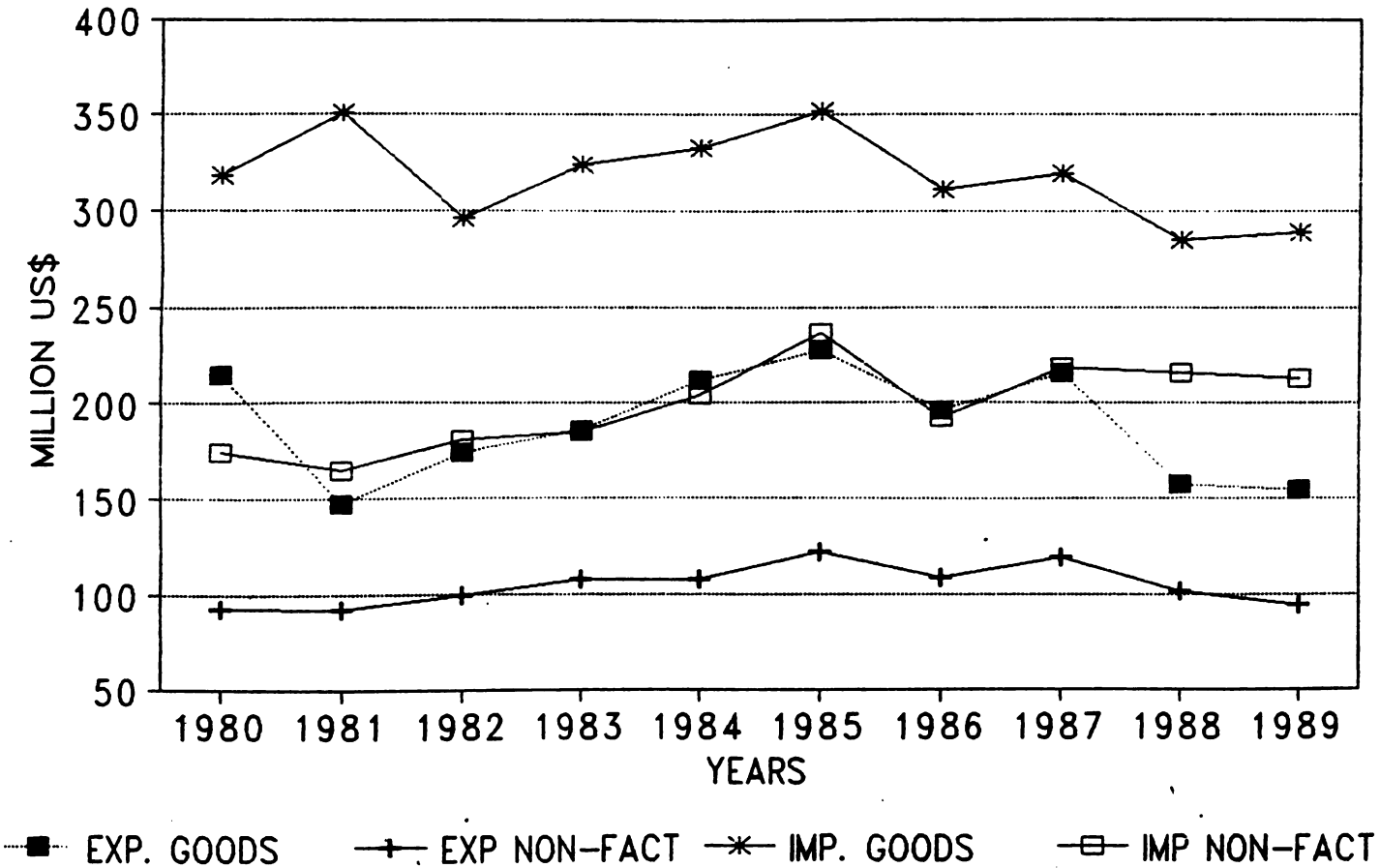
SOURCE: Unite de Coordination des ONGs. MPCEFP. 1991.

FIGURE A.1: VALUE ADDED BY MAJOR ECON. ACTIVITIES – HAITI 1980–90



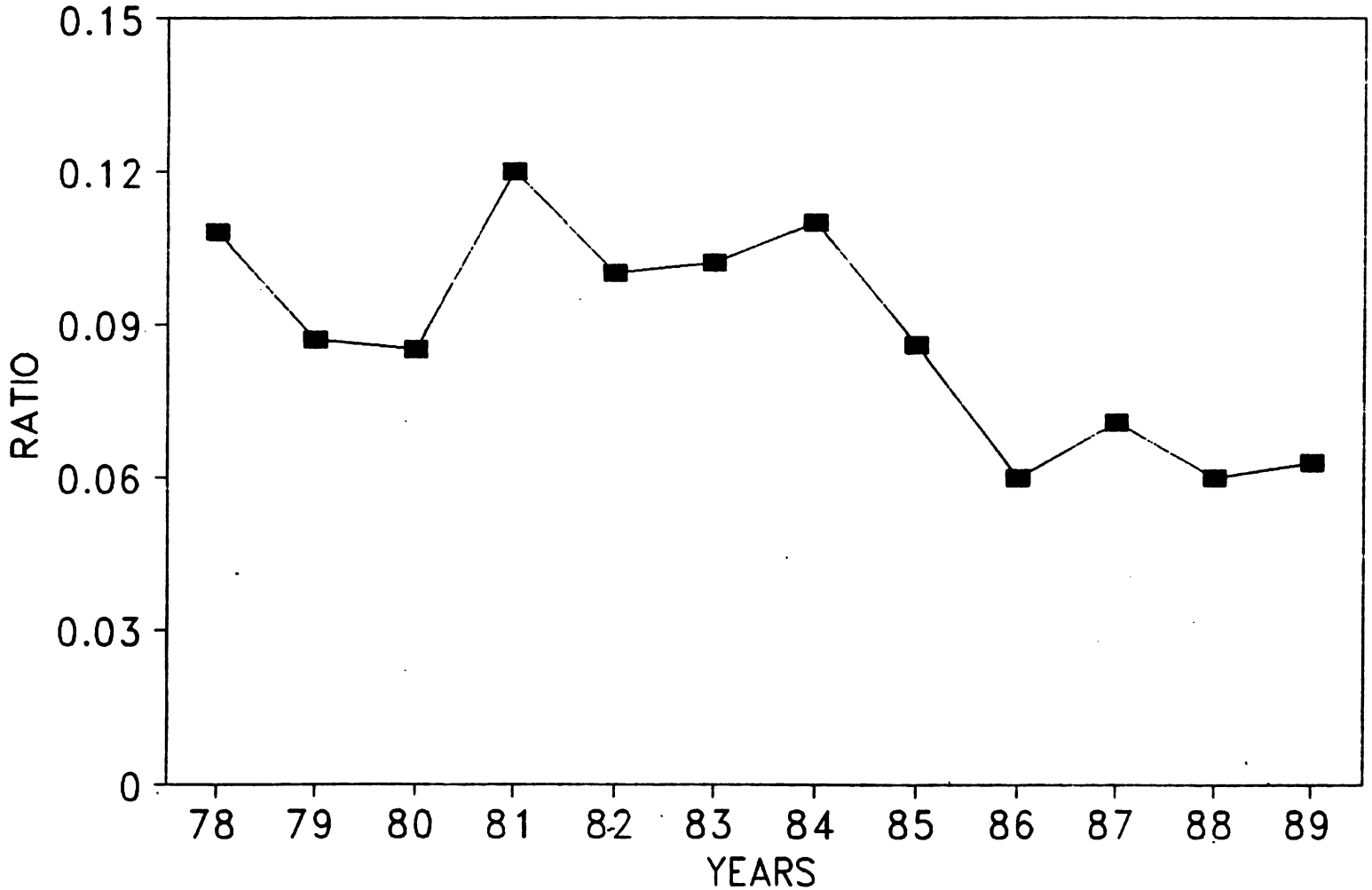
SOURCE : IDB. 1990.

FIGURE A.2: HAITI EXP. AND IMP.OF GOODS & NON-FACTOR SERVICES, 80-89



SOURCE : IDB, 1990.

Figure A.3 : RATIO OF PUBLIC INVESTMENT TO GROSS DOMESTIC PRODUCT



SOURCE: USAID. 1989.

BIBLIOGRAPHY

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AGRICORP/IRAM. Releve à Grison Garde: Nord d'Haiti. 1985.

AGRICORP/IRAM. Releve à Gran-Bassin: Nord-est d'Haiti. 1985.

AGRICORP/IRAM. Releve à Quartier Morin: Nord d'Haiti. 1985.

AGRICORP/IRAM. Agriculture et Paysans (Paysans de Dondon: Nord d'Haiti) du Nord et du Nord-est. 1985.

AGRICORP. Haiti. 1989.

Anglade, G.. L'Espace Haitien. 1975.

Azael, A.. Communication Personnelle. 1991.

Boianovsky, David. SAN - Sistema Alimentos y Nutrición - Términos de Referencia para Estudio de Factibilidad y Asistencia Técnica para la "Journée de Reflexion" del Ministerio de Salud. Mayo, 1989. (Personal Comunication).

BREDA and IRAM. "Étude des Possilités d'Augmentation du Loyer des Terres Rurales de l'État". 1989.

BRH. Haiti Customs Yearbook. (Various Issues)

Brinkerholff, Derick W. and Arhur A. Goldsmith. Administrative Reforms and Decentralization in Post-Duvallier Haiti: Recent Actions and Current Choices. University of Maryland, 1987.

Bureau of Nutrition. National Nutrition Survey. Haiti: 1978.

Eddy, M. E.. Communication Personnelle. 1991.

IHSI. Études des Relations Entre la Population et les Besoins Alimentaires en Haiti. 1989.

Hyppolite, F. and Andre M.. Programme d'Investissement du MARNDR. 1990.

IICA. Bases for Designing a Rural Credit Program for Haiti. CEPPI, 1991.

IICA. Proyecto Sistema de Alimentos y Nutrición para la República de Haití, Etapa I. Informe de Misión de Reconocimiento. CEPPI, Abril 1990.

IICA-USAID. Coffee Project.

IMF. International Finance Statistics. (Various Issues).

Inter-American Development Bank. Haiti - Programa de Rehabilitación y Ampliación del Sistema de Riego y Desarrollo Agrícola del Valle del Artibonite: Segunda Etapa. Octubre 1990.

Inter-American Development Bank. Economic and Social Progress in Latin America. Special Sections on: Science and Technology; Savings, Investment and Growth; and Haiti. (Various Issues).

Inter-American Development Bank. Acciones Recientes en el Campo de la Nutrición. Washington: Enero 1988.

Inter-American Development Bank. Haiti - Report Socio-Economique. Juillet 1988.

Inter-American Development Bank. National Program for Swine Restocking, Sanitary Vigilance and Development of the Swine Industry. November 1983.

MARNDR. Resultats des Travaux de la Commission ad hoc sur le Recensement et la Formation du Personnel Profissionel du MARNDR. 1990.

Ministerio de Salud Pública y Población. Dirección de Higiene Familiar y Nutrición. Programa de Mejoramiento Nutricional. Documento de Trabajo.

Mock, C. and T. Mooney. Haiti: Agribusiness and Rural Enterprises Assessment. March 1987.

Pan American Health Organization. Health Conditions in the Americas. 1990. (Vols. I and II).

Roe, Terry L.. An Economic Evaluation of the Haitian Marketing System. 1978.

Smucker, Glenn. Peasants and Development Politics: A Study in Haitian Class and Culture, Ph.D. Dissertation, New School for Social Research, 1986.

UNDP. Cooperation on Development. Haiti: 1988.

USAID. Estimation de Rendements des Cultures. 1990.

USAID. Country Environmental Profile. Haiti: 1986.

USAID. Haiti - Agricultural Sector Assessment. November 1987.

Virginia Polytechnic Institute and State University. A Macroeconomic Analysis of the Agricultural Sector in Haiti. June 1989.

World Bank. Haiti - Agricultural Sector Study. June 1985. (Vols. I, II and III).

World Bank. Poverty Reduction and Bank Operations. April 1990. (Economic Advisory Staff).

World Bank. Haiti - Public Expenditure Review. September 1986. (Vols.I and II).

World Bank. Economic Memorandum on Haiti. May 1982.

World Bank. Economic Recovery in Haiti: Performance, Issues and Prospects. December 1988.

World Bank. Haiti - Updating Economic Note. April 1990.

World Bank. Tenth Meeting of the Caribbean Group for Cooperation in Economic Development. Special Donors Meeting on Haiti. April 1990.

World Bank. Haiti - Agricultural Sector Review. February 1991.

World Bank. Haiti - Policy Proposals for Growth. June 1985.

World Bank. Haiti - First Health Project. Staff Appraisal Report. November 1989.

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