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**Haiti Small-Scale Coffee Producers Production,
Processing, Quality Control and Marketing**

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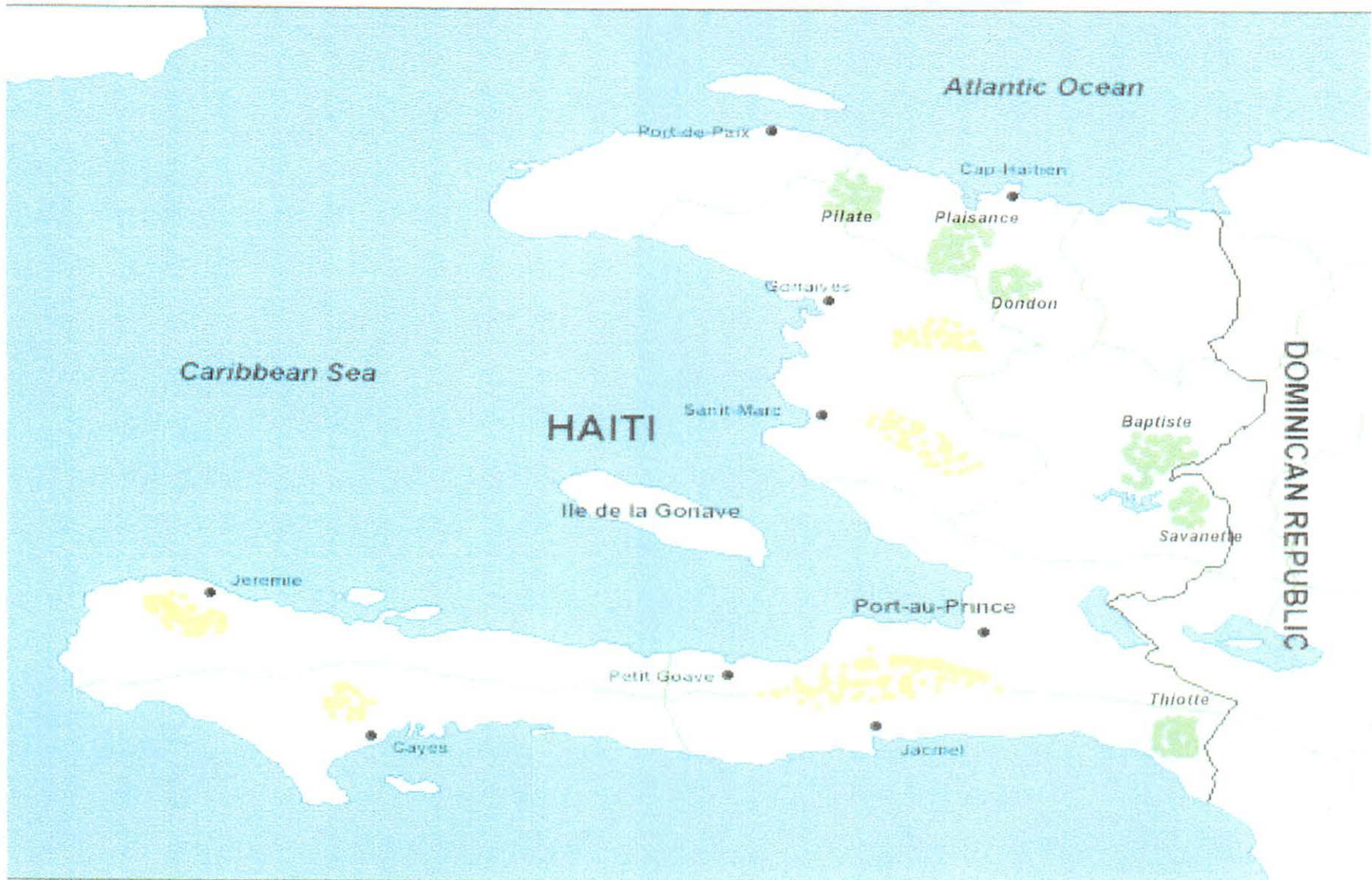
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Haiti: Coffee-Growing Areas

(Areas visited by the EnterpriseWorks team marked in *green*)



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ACRONYMS

ASPAM	Associations des Paysans de Molèon
CACGAVA	Coop. Gabard Le Vaillant
CAPP	Cooperative Agricole des Petits Planteurs
CARE	Canadian American Relief Everywhere
COEB	Coop. Excelsior
EWV	EnterpriseWorks Worldwide
FACN	Federation des Associations Cafeières Natives
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GNP	Gross National Product
IADB	Inter-American Development Bank
ICA	International Coffee Agreement
ICO	International Coffee Organization
IDA	Inter-American Development Bank
IICA	Inter-American Institute for Cooperation on Agriculture
ITS	Impact Tracking System
NCOCAB	Nelle Coop. Cafeière de Baptiste
NGO(s)	Non-Governmental Organization(s)
PADF	Pan-American Development Foundation
PLUS	Productive Land Use Systems Project
PRIMEX	Group of Major Coffee Exporters
SECID	South-East Consortium for International Development
SOCACHO	Société de Café Choix, or Choice Coffee Society of Cap Haitien
SOCOOPEN	Cooperative Étoile de Noël
SPLB	Sere Pou Le ou va Bezouen
STABEX	Stabilization d'Exploitations (European Union Funded)
TMB	Total Monetary Benefits
UNDP	U.N. Development Program
USAID	United States Agency for International Development
WB	World Bank

Small-Scale Coffee Producers Production, Processing, Quality Control and Marketing Report

I. Introduction

Coffee is one of the principal agricultural products in international trade volume and value. The coffee market—totaling nearly US\$19.5 billion per year—is highly competitive and organized. Coffee is grown and exported by more than 50 developing countries, about half of them in Africa, but industrialized countries are the most significant consumers. Coffee, therefore, plays a vital role in the trade and monetary exchanges between developed and developing countries, enabling the latter to earn the valuable foreign exchange they require to import capital and consumer goods from the former.

Haiti and several other producing countries depend to varying degrees on coffee exports. According to the International Coffee Organization (ICO), when in 1986 coffee prices were at the levels established by the ICO quota-price mechanisms, 17 developing countries depended on this product for more than 25 percent of their foreign-exchange earnings. Of these, nine developing countries received more than 50 percent of such earnings from coffee.

Coffee production is also a major source of employment in all producing countries, particularly for the poorer segments of the rural population. The coffee sector, because of its great capacity for income distribution, causes a substantial social impact—especially through the employment opportunities it generates which represent a major incentive against migration from the rural areas.

The smallholders, comprising the majority of growers worldwide, are in many countries organized into large groups—cooperatives, producer unions, federations or associations—which constitute important instruments for economic development. The advantage of these types of organizations is that through them, a great number of farmers can be reached more effectively and economically. They also lend themselves better for crafting alliances for the use of processing facilities and exchange of information and for negotiating sales of coffee collectively and, therefore, obtaining on better terms.

II. Scope of Work

The purpose of this consultancy was to carry out an assessment to identify the needs, constraints and potential demand for services in coffee cooperatives and producer associations as selected by the South-East Consortium for International Development (SECID), in conjunction with institutions collaborating with the Productive Land Use Systems (PLUS) project. The evaluation of local conditions—specifically the existing institutional framework—and the needs detected, will facilitate

EnterpriseWorks Worldwide's consultant team to develop a series of cost-effective interventions aimed at increasing the incomes of small-scale coffee producers. The interventions would include:

- ❖ *Implementing a marketing strategy and direct technical assistance* to improve access to up-to-date market information and to facilitate direct linkages between the small-scale producers and more competitive markets in the United States and Europe. Likewise, the strategy would seek to establish mutually beneficial relationships and alliances between producers and buyers that could generate potential joint ventures and innovative financing for the producers.
- ❖ *Improved processing technology* to facilitate the transition of the producers from natural coffee (sun-dried unprocessed cherries, a practice that damages the inherent quality of Arabica coffee) into the higher-value washed coffee. Also, the use of improved technology would increase efficiency in the transformation process and further enhance the quality of the product, thus maximizing the value added by the producers and their associations.
- ❖ *Developing the managerial capacity of the organizations* through the implementation of improved management information systems that would help enhance their capacity to make more informed decisions and improved negotiations. Likewise, these systems would have a direct impact on increasing the levels of productivity and profitability of the organizations' operations.
- ❖ *Improved farm management practices* to increase the productivity of the small-scale coffee producers' farms by introducing better farm management practices, which would include higher yields by optimizing plant population, integrated pest management, shade regulation and crop diversification to promote food self-sufficiency and enhance biodiversity. Likewise, the introduction of better collection practices would enhance the quality of their coffee and maximize income. Special emphasis would be placed in helping the farmers move away from inefficient and harmful agricultural practices that are incompatible with efforts to maintain environmental quality.

III. The World Coffee Economy

Coffee producers worldwide have been emerging from a long crisis during which international prices barely covered production costs—if at all. From 1989 to mid-1994, coffee underwent the suspension of the economic clauses of the International Coffee Agreement (ICA), a deep drop in world market prices, growing indebtedness by growers, and deterioration of coffee production and infrastructure. The extent of the impact of low coffee prices on development may be measured by the loss of more than US\$15 billion in foreign-exchange income suffered by developing countries during the three years of low coffee prices (1989/90 to 1992/93). That amount reportedly exceeded the total net

disbursements of the World Bank (including the IDA) to Africa and Latin America during the same period.

In mid-1994, a severe frost and subsequent drought in Brazilian coffee areas, coupled with an international retention plan, led to a rise in the market and then to another downtrend. While in 1997 prices surged on the market and benefitted many producers, the sudden rise left others out—particularly small-scale producers. Since then, prices have been generally easing downwards.

Under these circumstances, many coffee trade professionals find that measures to reduce the impact of the cyclical nature of the international coffee economy should encompass initiatives to stimulate the current trend toward better quality coffees of all origins, including organic. Given the increased competition and consumer demand for high quality, the market for low-quality coffees is considered very vulnerable. (See Annex I.)

IV. Background on Haiti

A. The Country

Haiti won independence from France in 1804. Its development agenda poses an enormous challenge to the government and the development community. With a population of 7.5 million on about 28,000 km², Haiti has the highest population density in the Western Hemisphere. Social indicators are among the worst in the region, and a GDP per capita of approximately US\$300 makes Haiti also the poorest country in the Hemisphere. A comparison of social economic indicators shows that the country has been falling behind other low-income developing countries since the 1980s.

Economic stagnation is mainly the result of inappropriate economic policies and political instability. In the aftermath of the 1991 coup d'état, Haiti experienced a dramatic deterioration in economic and social conditions. Three years of military rule (1991–1994) led to increasing economic mismanagement and an international embargo, which in turn caused a decline of about 30 percent of GDP and a great loss of jobs. Currently, unemployment is estimated at 70 percent, making job creation a priority for the government and the international community.

Rural poverty is pervasive, entrenched and severe. U.S. Agency for International Development (USAID)'s data for 1995 indicate that about 80 percent of rural households could be classified as very poor and 40 percent of the total population as households with an average income of one-half the poverty threshold.

To help the government reduce poverty and improve the welfare of all Haitians, international organizations such as USAID, the Inter-American Development Bank (IADB) and the World Bank

are giving priority to the implementation of programs that directly assist the poor and improve social services. Haiti has the lowest school enrollment and literacy rates (around 50 percent) in the Hemisphere and a decline in the health and nutritional status of children, about half of them now having caloric intakes below 75 percent of World Health Organization's minimum daily requirement. Infrastructure is in a state of complete disrepair, roads canals and bridges are crumbling and electricity and clean water are scarce.

Many friendly countries endeavor to assist Haiti directly or through their institutions in an effort to counter the dire poverty indices suffered by a country so fraught with history and its hard-working people. The assistance provided by various organizations to Haitian coffee has also been useful, albeit too disperse. (See Annexes II and III.)

B. Agriculture and the Environment

Two-thirds of Haiti's labor force lives in rural areas, yet agriculture contributes only one-third of the GNP. In terms of employment, however, agriculture remains the country's most important economic sector, although its contribution has been declining and is expected to continue its long-term downtrend. Per-capita agricultural production has fallen steadily since the 1970s, mostly on account of discriminatory policies and under-investment in people and services.

As a result of the embargo, agricultural production dropped about 17 percent between 1991 and 1994 due to its effect on imported inputs (seed, fuel), the deterioration of rural infrastructure (roads, irrigation canals) and continuing land degradation. The decline affected both subsistence and cash crops, and food self-sufficiency decreased from 70 percent in 1986 to about 50 percent now. Aggressive tropical rains have accelerated degradation of vegetative cover and cultivated areas, causing floods, deeper ravines and soil loss that have pushed farmers to step up already high rates of deforestation in their effort to find new sources of revenue.

The decline of the rural sector is explained, among other factors, by a lack of rural infrastructure and historic under-investment in rural human capital. Throughout Haitian history, most farmers have never benefited from agricultural support services such as new technology transfer, credit, market information, plant material and training.

In addition, government support services that would promote technological change are practically non-existent. Structural and policy changes in recent years include the demise of the sugar industry, the removal of quantitative protection for traditional crops like maize and rice, government subsidy for rice imports, and the reduction or elimination of export taxes, now benefiting producers of coffee, sisal and cocoa. International market developments have generally impacted negatively on Haiti, particularly the significant decline of coffee and cocoa exports since early 1989.

Haiti's environment has been severely damaged by years of deforestation and overuse of the land. The World Bank, U.N. Development Program (UNDP) and USAID are working with the government in a National Environmental Action Plan to develop a program that takes into account the interrelationship of agriculture, environment and poverty. High population density, scarcity of rich agricultural land, rural infrastructure and access to support services, coupled with the absence of interventions to reduce environmental degradation, unviable small plots and environmental constraints, are leaving people with only two options: to clear the few remaining forests and fragile farm uplands or join the rural exodus to the big cities and the United States. (See Annex IV.)

V. The Coffee Subsector

Arabica coffee was introduced into Haiti by the Jesuits in 1715. *Typica* is the dominant variety, accounting for about 90 percent of the tree population, followed by *Catourra*, *Mondo Novo* and *Bourbon*. Coffee is Haiti's most important agricultural export crop. It is estimated that 1998/99 crop exports will generate foreign-exchange earnings of US\$15 million, accounting for an estimated 70–80 percent of total agricultural exports. As in many producing countries, however, production has fallen with the onset of low market prices since the collapse of the International Coffee Agreement in 1989. In addition, Haitian coffee production suffers from and the impact of the 1991–1994 embargo, which led to neglect of coffee trees (not to mention disease), aged trees, degraded soils, high transport costs and land tenure problems. Also, exports have dropped as a result of volatile world prices, unofficial sales to the Dominican Republic and increased national consumption. Current coffee production in Haiti is estimated at 450,000 (60 kg) bags, of which about 150,000 bags are officially exported.

Arabica coffee is grown in all of Haiti's nine departments at altitudes ranging between 400 meters in the North and 1,500 meters in Thiotte. This coffee-producing area of 100,000 hectares (ha) has a density of 1,500 trees per ha and yields an average of 450 lb per hectare. Several varieties are grown (*Typica*, *Bourbon*, *Salvadoreño*, *Mondo Novo*, *Catourra* and *Catimor*), but 90 percent of the trees are of the *Typica* variety. The life of a coffee tree may fluctuate between 20 and 30 years, and in the absence of plant renewal, yields have been decreasing as evidenced by the fall in output and productivity in the past decade. Fertilization deficiency—particularly nitrogen, magnesium and zinc—accounts for the high incidence of such pests and diseases as *Hemilea vastratrix* (rust) and *Rosellinia* (root rotting).

There is no recent statistical information available, but the number of producers is estimated at 250,000—70 percent of them very small-scale producers owning less than two ha of land.

VI. EnterpriseWorks Team's Assessment

During its eight-day field work in Haiti from March 15 to March 24, the EnterpriseWorks (EWW) team visited three producing areas in three departments: the North (Plaisance and Dondon), Center (Baptiste and Savanette) and South-East (Thiotte). The team was comprised by Gilberto Amaya, *Agro-industrial Technology Specialist/Team Leader*; Victor Mencía, *Coffee Production and Cooperative Management Specialist*; and Patrice Gautier, *Coffee Marketing Specialist*. José A. Gemeil, *Tree Crops Commodity Officer*, coordinated compilation of this report after the core team's returned.

A. North (Plaisance and Dondon)

In Plaisance and Dondon, coffee production takes place at altitudes of 400–700 meters above sea level. Plaisance has bad roads and a clayish soil; its production is falling. Both Plaisance and Dondon are dominated by very small farms in which coffee is part of a traditional subsistence farming system, along with cacao, plantains, avocado, mangoes, bananas, bread fruit and other crops that are very important for risk management and family subsistence.

The predominant coffee variety, *Typica*, is followed in importance by *Catourra*, which is being disseminated by the STABEX project. As in the rest of the country, the importance of coffee as a cash crop has declined and does not constitute the main source of income for the individual farmer. As a result, the trees appear neglected, producing low yields (less than a half pound per tree) and with high levels of infestation by such diseases as coffee rust. A recent outbreak of the coffee borer, which has been detected in plots established by the Ministry of Agriculture, is responsible for crop losses of up to 20 percent in the neighboring Dominican Republic.

Coffee tree regeneration mainly results from spontaneous germination of coffee berries that fall to the ground. In the area surveyed, the trees, once grown, are not fertilized, pruned or sprayed because of the high cost of chemicals. To compound the problem, since shade trees are not pruned to control shade because they are fruit trees whose production is also valuable to the farmer, the excessive shading contributes to the spread of disease, poor tree development and, consequently, low yields. Fortunately, the *Typica* is a very resistant variety that can produce under very difficult conditions of drought and low maintenance. This is not the case for the *Catourra*, whose production falls dramatically under poor management; and, given the relatively low altitudes and lack or absence of access to credit, inputs and technical assistance, this variety is not a good choice for this region.

Since coffee farms in this area nearly resemble natural forest conditions in terms of biodiversity, their management system possesses all the necessary elements to be certified as organic coffee farms. Farmers produce natural coffee, which is sold to intermediaries, and washed coffee for direct delivery to exporters. As mentioned above, organic coffee commands high premiums in the

international markets. After the EWW team left, we understand that SERVICOOOP recently negotiated organic certification for the product of this region.

Our team also visited the Excelsior (COEB) cooperative in Plaisance, and the Gabard Le Vaillant (CACGAVA) and Vincent Oge cooperatives in the Dondon area. They represent over 2,000 farmers whose annual production is estimated at 2,000–2,500 (60 kg.) bags. According to estimates made by members of the cooperatives, however, there are about 30,000 coffee producers in the Dondon area alone representing a potential production of 25,000 to 30,000 bags per year.

B. Center (Baptiste and Savanette)

In the Center department, the team first visited Baptiste, traditionally a coffee-producing area. Here production takes place in very small farms at altitudes ranging between 1,000 and 1,200 meters above sea level. In this area the soil is stony. Coffee farming here is more specialized than in the North. Producers use fertilizers and other inputs, and according to accounts from farmers interviewed by the team, this was a major coffee-producing area before low coffee prices discouraged production and major exporters abandoned their operations. As a result, a major station of the Ministry of Agriculture was closed, three relatively large processing facilities were given up, the road from Port au Prince fell into complete disrepair (the stretch from Bellardere to Baptiste is in very poor condition), and, coffee trees were abandoned or not properly maintained.

The *Typica* variety predominates here too, although *Catourra* trees are being increasingly promoted by STABEX. According to the farmers, this project has delivered 1.5 million coffee seedlings at subsidized prices, but the lack of follow-up and technical assistance has led to improper use and waste of the planting material. Our team was also informed that STABEX is planning to establish 4,000 ha of *Catourra* when new funding expected from the European Union becomes available.

As in the other places visited by our team in the North, the trees in this area, according to the farmers, are exceedingly old (over 50 years), weak and prone to disease, and very low yielding. All of the cooperative members produce washed coffee, which they sell to Dominican Republic buyers in the absence of local buyers. The average altitude of this producing area and the latitude at which Haiti is located combine to offer a microclimate that enhances the potential for production of premium quality coffee.

The team interviewed members of three cooperatives—Nelle Coop. Cafeière de Baptiste (NCO CAB), Assoc. des Paysans de Moléon (ASPAM) and Assoc. de Bienfaisance de Baptiste— representing over 2,500 members. The current Baptiste's production is estimated at 20,000 (60 kg) bags, which could increase to approximately 35,000 bags by 2003 if STABEX helps the farmers establish the proposed 4,000 hectares.

In **Savanette**, while production occurs in very small farms at altitudes ranging between 900 and 1,000 meters above sea level, the team observed altitudes in excess of 1,300 meters. Although there is no recent information, coffee farming in the area has undergone a stark decline. According to members of the Sere Pou Le ou va Bezouen (SPLB) cooperative, this used to be a major coffee-producing area. They recall the time when the surrounding hills—now almost entirely denuded of trees—were planted to coffee before low coffee prices discouraged production; most producers abandoned their crop and major exporters abandoned their operations, including a relatively large processing facility, in the area.

On the hills, most farmers are now growing annual crops such as beans and maize. They perceive these crops as more profitable because they get three harvest per year and have more control over the prices they receive for their product, which is sold to buyers coming to their community. This practice is exacerbating environmental degradation for a short-term gain from products whose long-term profitability is questionable at best. The road connecting Savanette to Port au Prince fell into complete disrepair, and the section from Lascahobas to the community is undergoing major repairs.

The *Typica* variety is predominant here, although *Catourra* trees are increasingly being promoted by STABEX, whose first phase funding has expired. According to the farmers, this project only delivered coffee seedlings at subsidized prices, with no follow-up or technical assistance. As to assistance from other organizations, one of the farmers said that they get some forestry trees from the Pan-American Development Foundation (PADF), and subsidized maize and beans seed from the Food and Agriculture Organization (FAO), which is promoting food security in Haiti. The cooperative also receives funding from the Banque de Crédit Agricole for its credit revolving fund.

As in Baptiste, trees here are exceedingly old, weak and prone to disease and produce very low yields. All of the cooperative members produce washed coffee, which they sell to Dominican Republic buyers for lack of local buyers. The average altitude of this producing area and the latitude at which Haiti is located combine to offer a microclimate that enhances the potential for production of premium quality coffee.

SPLB, the only coffee cooperative in Savanette, has 700 registered members, and 300 more in the process of registration. Current output is estimated at 10,000 bags. The cooperative, very concerned about the decline of coffee production and the negative environmental impact on the annual crops, has brought farmers from Thiotte to train SPLB members in a bid to reintroduce coffee culture. While they recognize this is a difficult task, they will continue pursuing it if it makes sense financially.

C. South-East (Thiotte)

Thiotte continues to be one of the major producing areas in the country (60,000 bags). Its farmers produce coffee as a formal business operation, although the area has also experienced an output decline triggered by low coffee prices, abandonment by Haitian exporters and the lack of a good road infrastructure. Production takes place in farms ranging from small to medium size (from 1 to 16 ha) at altitudes between 900 and 1,500 meters above sea level, but our team observed altitudes in excess of 1,600 meters in that area.

The team interviewed members of the Cooperative Agricole des Petits Planteurs (CAPP), comprising 500 members, and Cooperative Étoile de Noël (SOCOOPEN), comprising 40 registered members with 16 in the process of being registered. The *Typica* variety predominates, although *Catourra*, *Bourbon* and *Mondo Novo* trees are being increasingly promoted by the Ministry of Agriculture through the STABEX project. This project delivers coffee seedlings, makes seed selection and distributes other inputs like fertilizers and pesticides.

Because of better farm management and some technical support, the project trees are healthier and their yields are higher (about 1 pound per tree). The cooperative members produce both natural and washed coffee, which they sell to buyers from the Dominican Republic. In the 1998/99 season they began selling some of their coffee—over 600 bags—to SERVICOOOP. Of all the areas visited by our team, Thiotte offers the best altitude—up to 2,600 meters above sea level—and favorable climatic conditions for gourmet coffee production.

D. Conclusions

Coffee production in the geographic areas visited by the team is characterized by predominant subsistence farms in the North, and although still small-scale, a more commercial type of operation in the Center and South-East departments. The common denominator is the state of neglect of the farms, cultivated under poor management with trees that are very old, weak and prone to disease and low productivity. This is the consequence of a long period of low and unstable market prices, lack of government policies to support the subsector and very little private-sector's investment. As a result, coffee production has declined dramatically and Haiti has lost a great percentage of its market share (its highest quality coffee is marketed unofficially to the Dominican Republic) and much-needed foreign exchange along with it.

This apparently grim situation, however, presents Haiti with a great opportunity to target the fastest growing coffee market segments—organic and gourmet—which command high premiums. An improvement in management practices could help increase productivity on existing farms, and renovation with appropriate varieties would increase production, help regain Haitian's coffee market share and raise the income in rural areas. (See Annexes IV and V.)

This situation has led many farmers to abandon coffee and switch to annual crops on the hillsides, which are being more severely degrading.

VII. Agro-Processing

A. Wet and Dry Methods

Arabica coffee can be processed by two different methods. The dry method, which results in natural, or unwashed, coffee (also known as *café naturel* or *pilé*) is widely used in Haiti to process about 90 percent of its coffee; and the wet method, which produces the higher quality washed *Arabica*, is used to process about 10 percent of the country's coffee. The dry method is simpler, requiring less labor and machinery; but because of its lower quality, its international market value can fluctuate between US\$12-US\$30 per bag below the New York "C" Contract.

In the dry method, ripe coffee cherries are harvested and spread on *patios* (*glacis*) for drying. Drying time can take from two to three weeks depending on altitude and climatic conditions. As conducted in Haiti, the dry process consists of harvesting ripe cherries and placing them on the ground to dry, since most producers do not use *patios*. This practice results in longer drying periods that lead to molding and contamination with odors and other pollutants from the ground. The drying process is usually complemented with pounding with a mortar and pestle or mechanical hulling to remove the shell before exporting. Lack of access to improved technology produces a natural coffee of low quality and a high percentage of damaged beans. This coffee receives heavily discounted prices (minus US\$25.00/bag) in the international markets.

Because it requires higher investment in equipment and infrastructure, wet processing is usually conducted at facilities owned by private exporters or cooperatives. All of the cooperatives visited by the EnterpriseWorks team used wet processing at various technology levels, ranging from manual pulping and direct washing of the coffee in the rivers to more sophisticated central facilities covering the entire process—from cherries to green coffee. The facilities and equipment owned by these cooperatives are generally old and inefficient, and the management of the operation is deficient at the various stages of the process. Furthermore, the method used (a syphon to separate false cherries and pulping using large amounts of water, or washing in the fermentation tanks) is not appropriate for water-deficient areas as is the case with many places in Haiti. It is common, however, to hear that coffee is sold as *wet* parchment. For drying, the facilities or the technology used by these cooperatives are inadequate: it is common to see coffee drying with high rates of mold or whiting. Many have given up their mechanical drying practices because of their lack of access to this type of technology. The dry processing to produce green coffee for export is in the hands of a group of exporters who handle the last drying coffee phase and own threshing mills, sorting screens, silos and packing, weighing and storing facilities.

B. Ecological Technology

Most producers use the coffee pulp as organic fertilizer, but do not possess simple technologies to convert this solid waste into organic fertilizer. In most cases, the pulp is applied to the coffee trees in raw state, a reason why they experience a high rate of root rotting. The waste or residual waters are dumped into the streams; often, the producers wash their coffee directly in the rivers. Even though Haiti's agro-ecological conditions are similar to those in other producing countries of the Caribbean and Central America, the lack of technology transfer, technical assistance in agro-processing and quality control are the main causes for its coffee subsector's lagging far behind. Prices for Haitian washed coffee are also heavily discounted in the international markets.

Bilateral and multilateral donors like the USAID, IDB and some international NGOs have introduced improved wet processing technologies to some cooperatives and producer associations. The lack of access to financing, however, impedes a larger number of potential users from adopting such technologies. Innovative financing mechanisms will have to be put in place to make the benefits of these projects available to larger numbers of producers and enhance the subsector's ability to create more wealth and generate employment.

As a consequence of low technology and poor handling of the coffee, yields from the wet process are low, the percentage of damaged beans is high, and because of intermixing of coffees from different altitudes and varieties, overall quality of the final product is poor.

C. Diversification and Technology

It is important to emphasize diversification using appropriate technologies, an effort that would bring about a better and increased utilization of the land and higher productivity and income. Good planting stock and certified seeds provided by a responsible private or public organization to the growers would ensure good planting material, free of pests and diseases, and determine the failure or the success of the undertaking.

Production, productivity and profitability of coffee depend on such variable conditions as credit, price paid the producer, fiscal environment, and available technology that meets the producer's technical and economic efficiency needs.

VIII. Quality Control

Since the collapse of the International Coffee Agreement and its quota system in 1989, quality has become increasingly important in determining competitiveness in international markets.

Unfortunately, our team observed that production and post-harvest practices prevailing in Haiti clearly contradict the indications of current world market trends. While the market is demanding higher quality, Haitian coffee quality has fallen so much as to receive heavily discounted prices from its buyers. Some roasters in Italy, for example, discontinued their purchases of Haitian coffee because of reported contamination with microtoxynes (OTA). In addition, the increasingly declining volumes have caused the purchasing cost to rise.

Haiti's main competitors are producers of *Other Milds* (coffee ICO classification) in the Caribbean and Central America. But because of the dramatic changes occurring in the markets after 1989, these countries adopted more aggressive policies, in many cases involving heavy investment, to be able to compete. With its natural-processed coffee, Haiti did not adopt similar policies or made the necessary investments to reform and reconvert its coffee industry to produce the better quality washed coffee, which fetches higher market prices and brings more value added to the producers. Instead, it continued producing *café naturel*, competing with Robusta producers and Brazil beans in a low-end segment of the market.

Because the majority of traditional exporters in Haiti are not coffee producers themselves—unlike what happens in Central America, for example—they have no incentive to invest in improving coffee production. Since they purchase their coffee through *speculateurs* (speculators), the exporters do not have a direct contact with producers and therefore no influence on how production/processing is done at the farm level. They buy coffee of any quality just to keep their business going, but the low quality of the final product is heavily penalized in the international market. Sometimes the market pays US\$25 or US\$35 per bag *below* the New York Exchange price, making the returns unattractive to the producer, who in turn reacts by further neglecting production and processing. It is a vicious circle of lower prices, lower quality, abandonment of farms and decline in production. At this rate, Haiti might soon become a net importer of coffee.

There is, however, great potential for transforming Haiti's coffee subsector from an exporter of low-quality natural coffee into a producer of good-quality washed coffee and an important player in the fast-growing gourmet segment of the market (Haitian Bleu). While great emphasis is currently being placed on promoting one excellent brand of coffee, efforts should also be directed at improving the quality of all Haitian coffee. Promoting only one or several brands is only part of the overall solution.

From seed to cup, coffee quality involves setting up strict controls along all the processes: from selection of the adequate variety of seed, identification of the most favorable areas for coffee development, picking the cherries at the right maturity stage, removing the green or dried berries, correctly depulping the cherries the same day they are picked, sorting the beans during wet processing, dissolving the mucilage (fermentation) timely, washing the coffee in clean water, mixing beans only from the same altitudes, and—perhaps the most important step—using good drying techniques, followed by adequate storage and dry processing.

IX. Participating Organizations

The producer organizations visited by our team show an incipient level of institutional development if they are compared with their counterparts in Central America and the Caribbean. The organizations find themselves at various levels of development, ranging from a very weak degree of cohesion to greater sophistication. The latter may include administrative and financial systems such as accounting control and ability to handle modest credit and savings portfolios through members' deposit accounts.

One of these organizations, the Sere Pou Le ou va Bezouen (SPLB) cooperative in Savanette, works with a Banque de Cr dit Agricole's line of credit for its members' farm loan portfolio. To varying degrees, all the organizations maintain for their members an elementary service base which can be improved through business development services and can lay the grounds for building financial sustainability of the organizations.

Regarding democracy and participation, we found that all groups have their own boards or assemblies duly elected by the members, and women's participation going beyond field work. At CAPP, for example, we attended a general assembly meeting where women account for 15 percent of total membership and play a proactive role. Several of them would run for executive positions. Our experience in other countries is that women's leadership has sparked a positive impact on the organizations' development.

X. Institutional Structure and Technical Support

The lack of a policy to support agricultural sector development has limited the presence of government support in rural areas. Most of the rural development initiatives observed during our team's visit were implemented by NGOs. The producers in the communities and cooperatives visited by the team reported scant institutional support in terms of financing, technical assistance for producing and processing, training to improve management skills and institutional strengthening or marketing of their product.

In the absence of clear policies and investment by the government and private exporters, and given the lack of resources among the producers and their organizations, the international community has a major role to play in the reconversion of the coffee subsector and, therefore, in the subsector's use of its great income distribution capacity to alleviate the abject poverty among producing families.

International donors should help create or strengthen an existing institution to fill the existing void and become a balancing factor in the market. This institution would play a catalytic role in influencing the practices that determine the quality of the end product by promoting a transformation

in the way coffee is produced and processed and by introducing an appropriate quality control mechanism supported by price incentives to the producers. It could also become a direct link between producers and the market by buying/selling their coffee, analyzing and distributing market information, developing new products and promoting transparent business practices.

Some of these functions are being performed to varying degrees by ongoing USAID-funded projects. Yet given the scarcity of resources, there is a need for better coordination among these projects to capitalize on the complementarity of their efforts and therefore make a more efficient use of the available—and new—funding so as to prevent duplication and cause a greater impact on producers.

The team learned that only about 10 percent of the coffee producers in Haiti are organized into cooperatives and associations.

Working with producers through their organizations is the most cost-effective way to bring the benefits of any intervention, reach large numbers of farmers and achieve the desired project impact. Our team was aware that in the area of influence of the USAID-funded project implemented by the Inter-American Institute for Cooperation on Agriculture (IICA), the producers were

organized into associations, which were later agglutinated into the Federation des Associations Cafeières Natives (FACN). This is a good concept that represents a cost-effective way to reach large number of producers.

XI. Marketing

Coffee is shipped in the form of whole green beans by several exporters. As in the rest of Haiti, the coffee in the areas visited by our team is sold to the intermediary, who in turn sells it to the speculator, a state-licensed buyer, who then sells it to the exporter. Sometimes the speculators are on the exporter's payroll, because by law he cannot buy directly from individual farmers. Haitian farmer cooperatives, however, are allowed to sell directly to exporters.

Also, since market price information is only available to exporters, the producers as a rule take the price offered by the better organized exporters or intermediaries. A commercial balance could be achieved, therefore, by incorporating the producers into the value chain. The current participants play—and should continue to play—an important role in Haitian coffee trading. The resulting competition can only improve the processes, open new markets, diversify brands and increase the incomes of the producers and their families, who would therefore be in a better position to invest in their plantations and take advantage of the distribution capacity.

In the 1970s there were more than 20 coffee exporters in Haiti. But as coffee production declined, so did the number of exporters. PRIMEX, created in 1992 by the Brandt, Madsen, Dufort and

Kersaint export houses, is the largest exporter with about 55 percent of the market; it was formed to facilitate, given the decline in production, the assembly of enough coffee volume to meet larger orders. Other exporters include: Wiener (20 percent), Novella (15 percent), Baptiste (7 percent) and Vital (3 percent). Société de Café Choix, or Choice Coffee Society (SOCACHO) of Cap Haitien, only produces coffee for the Japanese market. It is owned by Usman, Madsen and Novella.

Because of the lack of access to formal credit sources, financing for the producer is provided by the speculator, who usually has developed a long relationship with the farmer and often purchases the coffee prior to the harvest. The farmers, therefore, are committed to delivering their coffee at heavily discounted prices unilaterally predetermined by the speculator. In the North, cooperatives also get this kind of treatment by the exporters, who advance them monies to purchase coffee from their members and deliver it to the exporter. The cooperatives agree to receive a 60 percent advance against the value of their coffee, and the remaining 40 percent after the exporter makes the sale. The reality, however, is different. According to cooperative leaders interviewed by our team, the exporters often sell the coffee and do not inform the cooperative; they use the remaining 40 percent to continue financing their own operations for long periods of time. In addition, the lack of access to market price information from the exporter or any other source prevents the cooperatives from knowing the final price of their coffee.

Private exporters say that washed coffee accounts for only 10 percent of coffee exports and that this year it may account for just 5 percent. Due to several problems—including security and difficult transport given the state of disrepair of the roads—Haitian exporters are not present in major producing areas along the border with the Dominican Republic in the Center and South-Eastern departments, areas that produce mostly washed coffee. The washed coffee is sold unofficially to Dominican Republic buyers, who according to the farmers are paying high prices, sometimes even above the New York "C" Contract.

Our Dominican Republic sources confirmed this information. Among the reasons they mention are low domestic production stemming from adverse climatic conditions, broca infestation and the steady growth of domestic consumption. The combination of these conditions made the domestic market even more attractive than the export market. Off the record, we were also informed that some of the highest quality Haitian coffees, especially from Thiotte, and Dominican coffee are traded unofficially with Puerto Rican buyers at even higher prices. Sometimes the coffee ends up being sold as a filler to increase volumes of the coveted Jamaican Blue Mountain, which demands US\$6.00 per pound in the international market.

Even though the Dominican buyers appear to be paying exceptionally high prices—and often directly to the producers—there is always a hidden catch in the transaction. The coffee is usually sold in the form of wet parchment, but since the farmers often ignore the conversion factors in calculating the equivalence between wet parchment and green coffee, they are usually cheated through the

manipulation of these factors, usually known only to the buyer to his sole advantage. Accordingly, most of the time farmers are paid for less coffee than what they really delivered. Another common practice at the border, when supply is high, is holding off from buying any coffee in the morning, only to arbitrarily lower the price in the evening. Because wet parchment coffee is very perishable, the buyer is confident that the farmers will try to avoid taking the coffee back to Haiti through difficult back-road conditions and sustain a heavy economic loss later due to over-fermentation or molding. Unlike most Haitian buyers, Dominicans demand quality washed coffee.

Agro-climatic conditions in many places along the Dominican border, especially in and around Thiote, are excellent for the production of high-quality coffee, including the preparation of upscale gourmet. Haitian exporters must take advantage of these conditions and reclaim the coffee from that region to make it a more integral part of the Haitian coffee subsector economy. Because of the high quality that can be obtained, this coffee can fetch great price differentials, and therefore increase farmers' income and bring more foreign exchange to the Haitian economy.

As mentioned earlier, current business practices in Haiti go against market signals. A complete disregard for quality by Haitian private exporters, and the lack of transparency in the transactions both inside Haiti and at its border with the Dominican Republic, are driving producers from the coffee subsector to other crops that appear profitable to them but which hurt the already degraded environment. In this context, there is an urgent need for significant marketing interventions to help restore farmers' confidence by bringing a sense of fairness to the market. Such an intervention or set of interventions would help recover production volumes, improve quality, and restore Haiti's reputation and market share in the international coffee trade.

XII. USAID'S Marketing Initiatives

USAID/Haiti has supported efforts to improve Haitian coffee quality and promote exports to create added value for the producers and generate employment. Those efforts include support for USAID's coffee promotion project (Haitian Bleu) and SERVICOOP's operations.

A. Haitian Bleu

The USAID-funded initiative to promote coffee through introduction of a brand into the U. S. specialty coffee market demonstrated the potential of Haitian Bleu. This brand secured a high fixed price of US\$2.00 per pound in a five-year contract—a rare occurrence, especially amid a downtrend in the international market.

B. SERVICOOP

This organization is an agricultural products marketing cooperative started in 1997 with USAID's financial support. SERVICOOP purchases cacao from farmer groups, prepares the cacao for export and sells primarily to M&M Mars in the United States. In 1998 it moved into a larger facility, which it refurbished, and installed part of the equipment to enter the coffee export business, putting the existing coffee processing equipment back into the service of Haitian coffee farmers.

SERVICOOP can help advance Haitian coffee development, once certain improvements are made to its setup and organization. It would start working with producer cooperatives selected from several areas of Haiti according to its purchasing capacity. SERVICOOP would have to be strengthened to become sustainable and to have as its main function serving its cooperatives. Initially, SERVICOOP could provide the following coffee services:

- ✓ Financing and buying
- ✓ Exporting
- ✓ Dry (final) processing
- ✓ Supplying inputs including improved seed
- ✓ Quality control assistance
- ✓ Market information (prices, trends, analyses)

XIII. Recommendations

Our team recommends:

A. Production

- ❖ **To expose Haitian farmers and their organizations—as a first step in developing reconstruction of the coffee subsector in Haiti—to the practices and experiences of their peers in other producing countries of the Caribbean and Central America.** In many of these countries, producers have reached higher levels of development in coffee production, processing and marketing. Also, they have strengthened their institutions by linking them to regional and worldwide networks of producer organizations that provide information and varying levels of support for institutional strengthening.

- ❖ **To design a technology package for coffee production to help Haiti catch up technologically with countries producing *Other Milds* in the Caribbean and Central America, in terms of volume and quality.**
- ❖ **To maintain, under current farming practices—especially in the North—the production of *Typica* coffee in view of its resistance to drought and disease.** This combination of characteristics would make it feasible to produce a good quality organic coffee that would fetch high price differentials in the U.S. and European markets. Given the knowledge and commercial orientation of the farmers in the Center and South-Eastern departments, the technology package, while still based on *Typica* coffee, would evaluate and support a gradual transition to viable higher-yielding varieties, such as *Bourbon* and *Catourra*.
- ❖ **To develop, in view of the marked difference in farming systems, two pilot areas through the application of the technology package, which would allow the transfer of technology in the two major geographical regions in the North and South-East:**

To set up in the North (Dondon) region, on the basis of an enhanced model of current subsistence farming, a package based on the production of *Typica* coffee. Within an agro-forestry scheme, high biodiversity would be maintained while promoting crop diversification, food security and diversified sources of income. Improved farm management practices would increase productivity, favoring the production of both natural and washed organic coffee.

The model would follow, in the South-East (Thiotte), a more commercial approach to produce a premium-quality washed shade coffee that would be prepared under the guidelines of the gourmet market to ensure high price differentials. This particular model would emphasize production of higher yielding varieties and state-of-the-art processing technology aimed at reducing the environmental impact of a more commercially oriented production.

- ❖ **To train paratechnicians from associations and cooperatives as these models are developed, using a learn-by-doing scheme to facilitate the transfer of technology to other farmers within and outside the immediate area of influence of the models.** The development of these model regions would help create special brands based on the quality that the specific characteristics and agro-ecological conditions of these specific origins impart to their coffees.

- ❖ **To protect the coffee ecosystem and maintain biodiversity by introducing agroforestry systems that, although based on coffee production, will promote crop diversification and income while improving food security in coffee-producing areas.**

B. Agro-Processing

- ❖ **To support local value added to coffee at the producer level for the purpose of enhancing the coffee subsector's ability to increase farmers' income, generate employment and fuel economic activities in other sectors of the Haitian economy.** During the mission, our team observed processing facilities using technologies that are obsolete and quite beyond their design lifespan; therefore, the yields and efficiency of the entire process are low and the number of damaged beans and depulped cherries is high. The result is a final product with low quality. Promoting the vertical integration of producers into wet and dry processing is one of the best ways to fulfill the proposed objectives. Our team estimates that increasing production of washed coffee—currently at 10 percent—to reach 25 percent of total exports by 2003 is an achievable goal.
- ❖ **To upgrade, as defined by the team, the existing processing technology while maintaining control at every stage of the process to ensure quality.** This is based on discussions with the President of SERVICOOOP about the need for a system that, while appropriate for wet processing in water-deficient areas, would obtain a uniform high-quality washed coffee. The system would consist of : a) pulping machine with a grading screen to separate beans by size and feed back the unpulped cherries to the pulper; b) a cleaning machine that removes the mucilage without the need of fermentation; and c) a drying *patio (glaci)* to remove moisture so as to be able to market high quality parchment coffee. The main advantages of the proposed system are: a dramatic reduction in the use of water in the pulping and cleaning process; the elimination of the fermentation stage, thus also removing the grave pollution problem experienced by producers of washed *Arabicas* in disposing of water from coffee fermentation and washing. As a result of the reduction in water usage, we can also eliminate the heavy investment usually involved in the construction of water storage.
- ❖ **To finance appropriate patios for drying and minimum quality-control equipment consisting of moisture-measuring tools and grading tools at the association or cooperative level, thus facilitating monitoring.** Since this is a very delicate stage of the process, workers must be trained on the job to be able to use the tools and manage the drying process effectively in order to get a uniform quality parchment coffee. The drying technology is a weak link in coffee processing in Haiti, having a tremendous impact on the quality of the final product. Most producers lack access to suitable patios and dry their coffee on the ground; since beans are not immediately harvested, beans or cherries with

different moisture contents are mixed together, resulting in a very low quality blend, often infected with molds. This problem cannot be corrected later in the process.

In addition, the team recommends:

- To introduce efficient and easy-to-handle equipment and machinery.
- To train coffee producers on the handling of the equipment and machinery.
- To train the coffee producers on modern, clean processing techniques.
- To transfer to producers easily understandable technologies for obtaining organic fertilizer from the pulp.
- To suggest already organized groups they should process their coffee as a joint effort so as to profit from economies of scale, standardize quality and make training and technical assistance more effective.
- To improve processing in cooperatives having agro-industrial infrastructure and train their personnel on how to operate the facility to obtain better coffee quality.
- To introduce, in parallel, water treatment systems that are easy to build and handle in order to protect water sources near the processing areas.

- ❖ **To provide better capacity for dry processing of parchment coffee into green coffee.** SERVICOOOP has a large facility in Port-au-Prince with the basic infrastructure necessary for dry processing and shipping of coffee to international buyers. The installed capacity of this facility is much more than SERVICOOOP can use for its own coffee operations. The cooperative requires additional investment to refurbish and install additional grading and drying equipment already available at its plant. With this equipment refurbished and put into operation, SERVICOOOP will also have a much better capacity to offer services to other cooperatives, NGOs and associations in order to reduce the need for unnecessary additional investments in dry processing.

C. Quality Control

To invest in setting up adequate quality control mechanisms to provide producers and their organizations with the ability to control every stage of the process and offer the exporters a product that meets the higher and uniform quality specified by the market. The necessary investments include equipment to accurately weight and measure humidity during the drying process and storage of coffee, as well as the necessary training to operate the different tools. At least a cupping laboratory should be established to assist producers and exporters in determining the quality requirements for their product and certify their compliance with buyers expectations.

D. Marketing

The marketing strategy and the needs for SERVICOOOP's strengthening will be presented in a separate document.

E. Institutional Strengthening

- ❖ **To replicate the producer organizations' structure at the national level and affiliated to a confederation, or national producers association.** The structure, as established by the IICA-implemented project, consisting of producer associations affiliated to a federation, could be replicated at the national level and affiliated to a confederation, or national producers association. This structure could be strengthened through specialized organizations such as EnterpriseWorks Worldwide in coordination with the Ministry of Agriculture, IICA and financial institutions. The main function of the institutional structure would be to channel resources and services to the producers on a cost-effective and sustainable manner. The sustainability of the system would be reached by the producer organizations' owning the businesses of processing and local marketing and providing technical support for the individual producers. Initially, the technical services could be provided directly by the support organizations. The Ministry of Agriculture (STABEX), SECID, PADF, CARE, IICA and EnterpriseWorks Worldwide, for example, could collaborate in designing the technical packages that would be transferred to the producers and have their technicians work directly with the second-tier organizations (federation levels). As these organizations become strengthened, they would hire technicians to continue providing the technical assistance as part of their regular services to their members. At the base, this system would be supported by a network of paratechnicians—star farmers at the association/cooperative level—who would work directly with their peers. The role of the support organizations would then be to update the basic technology package and transfer new technology to these core technicians within the system. The same system would be used to transfer ecological agro-processing technology, quality control mechanisms and enhanced post-harvest handling and preceding techniques.
- ❖ **To use variations of this approach to channel investment and working capital, as well as business development services, to the first-tier organizations and their individual members.** These services could be sustained and made to grow via the dues that farmers would have to pay for membership in the organizations, sales of products like inputs, packaging materials, seedlings, etc. and fees for direct technical services. Setting-up and strengthening a business-oriented producer-operated institutional structure is the best way to ensure long-term sustainability of the benefits derived from any large investment by the government or the international community.

F. Financing the Interventions

To increase productivity by about 10 percent—some 40,000 bags—and exports of washed coffee by 10–25 percent by the year 2003. These are efforts that will require interventions in the coffee subsector and the investment of large amount of resources. For a meaningful impact, the interventions should be staggered in stages.

Phase I. Beginning with a viable market-oriented first phase. At the center of this first phase would be a marketing company selling mainly high-quality washed coffee—including organic, gourmet and commercial grades—directly from producer cooperatives. To facilitate its operations, the company would collaborate with a specialized organization to provide some technical advice on post-harvest handling and processing, quality control and information on market requirements in terms of product specifications and quality control services—including coffee cupping and pricing. During the first phase, the company would sell coffee from all regions, thus setting the stage for other activities in increasing production volumes and quality. This phase would involve a total SERVICOP financing of \$421,695.

Phase II. To achieve the overall objectives of the interventions, EnterpriseWorks proposes to promote improved production and processing of coffee from two representative pilot regions in Haiti's North and South-East departments. Marketing efforts would make a special emphasis in promoting special brands from these specific origins developed under an improved production, processing and quality control scheme. These efforts will require significant investment for the transfer of an appropriate production technology package, introduction of upgraded processing technology and quality-control systems. Other areas supported by this phase of the project would encompass: a) further strengthening of the marketing company to expand its services; and b) establishment and strengthening of a producer-based institutional structure that would impart viability and long-term sustainability to the whole scheme. Although USAID can provide leadership and initial funding—totaling US\$1.5 million for this pilot phase—to set the strategy in motion, financing of the establishment and operation of such a system would require a coordinated effort with other donors in the international community and the private sector—including local financing institutions, exporters, international buyers—and the producers themselves. EnterpriseWorks could participate in the implementation of an initiative co-financed by USAID, the IDB and the producers. Funding from other partners could be leveraged during the program implementation. Both phases would benefit more than 6,000 small-scale farmers, or approximately 30,000 including their families, assuming five members per family. These beneficiaries are members of the cooperatives that our team visited during its mission.

XIV. Estimated Impact Projections

Assuming an annual production increase as a result of the proposed interventions, accumulated production by the year 2004 would amount to about 2.2 million bags through increased productivity of the traditional system. Of these, approximately 327,000 bags (15 percent) would be high-quality washed Haitian coffee—about 278,000 regular and 48,000 special—in the international market.

The higher quality of this coffee, together with promotional efforts, would help reach prices that are about the same as the New York "C" Contract price for at least 278,000 bags of regular washed coffee, and with premiums of about US\$30.00 for the 48,000 bags of special coffee. At the current prices (US\$107 per bag), as opposed to the discounted price of US\$95, this would mean an additional income of about US\$5.38 million from sales of washed coffee. There would be, however, a large impact caused by the improved quality of natural coffee, which could be sold at prices of US\$12.00 below the New York "C" Contract instead of US\$25 below, generating an additional US\$6.03 million from the 1.88 million bags sold as natural coffee during the five-year period.

To be conservative, it was assumed that natural coffee would receive a gradual decrease in penalty—from minus US\$25 to minus US\$12 per bag—only after year 3 of the interventions. The total estimated additional income amounts to US\$11.4 million. In terms of employment, if instead of losing 5,000 bags in the five-year period, we gain 215,000 bags in the same period, and assuming 11 person-day per bag, the activity would have generated or sustained 2.36 million person-days of direct employment.

XV. Measuring the Impact of Projects

The performance of EnterpriseWorks Worldwide's projects and programs is measured annually through a comprehensive Impact Tracking System (ITS). Established in 1993, the ITS provides timely information on how projects have increased enterprise productivity, producer incomes and employment. It enables comparison and aggregation of a variety of indicators across projects, geographic regions, program areas and the organizational portfolio. Managers and program directors are provided with the information they need to account to current donors, make project decisions with collaborating organizations and attract new funders and partner groups. As part of the system, EnterpriseWorks conducts periodic individual project evaluations, undertake special studies in select commodity areas and publish a series of companion documents to provide an in-depth review of specific accomplishments, challenges and lessons learned.

The ITS measures impact by the Total Monetary Benefits (TMB) earned, which include producer cost savings, producer income gains from the sale of final goods and services, and consumer savings. In each case, these are incremental gains resulting from a project, rather than the total income of

existing producers. Also, it has indicators to measure sustainability of impact (such as numbers of proven sustainable enterprises, economic participants and proven sustainable TMB) do not require waiting until a project is over. A sustainable enterprise is defined as one that recovers the full direct costs of production and distribution and generates producer income gains, either without any continued donor support from EnterpriseWorks or its project partners in the current year or with full recovery of the operating costs of project services. Sustainable enterprises generate revenues that exceed operating costs, but do not necessarily recover fixed costs or sunk development costs.

The USAID reviewed the ITS in 1996, citing it more than once as among the best tools of its kind.

Since 1993, EnterpriseWorks has assisted nearly 20,000 enterprises that continued to generate economic impact in 1997, today benefiting nearly 178,000 owners, workers, raw-material suppliers and consumer households. In 1997 alone, our programs generated \$9.47 million in total monetary benefits (TMB) from producer cost savings, producer income gains from sale of final goods and services, and consumer savings. Cumulative total monetary benefits from 1993 to 1997 reached nearly \$35.5 million.

In our Coffee Program, the ITS also pinpoints the following impacts:

- Producers' monetary benefits increased from an average of US\$450 in 1995 to US\$675.
- Better agro-processing yields—to produce 1 pound of green coffee it now takes only 5.24 pounds of cherries, down from 5.80 pounds before the project.
- The rate of damaged beans is 5 percent, down from 15 percent.
- Water usage is down by two-thirds, from 1 gallon to 0.35 gallon per 1 pound of green coffee, and
- A 20 percent reduction in the use of chemical fertilizers and pesticides with the introduction of organic fertilizer from coffee pulp and with biological pest control.

ANNEX I

**Coffee: Monthly and Composite Indicator
Prices on the New York Market**

ANNEX I

Coffee: ICO Monthly and Composite Indicator Prices on the New York Market
1979 ICA Agreement Basis

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
—Cents per pound—													
Colombian (Mild Arabicas)													
1990	82.07	91.55	103.24	101.79	99.14	96.01	92.45	103.30	102.21	97.20	92.38	97.06	96.53
1991	91.55	94.23	99.36	97.27	91.51	90.18	88.02	88.09	91.95	82.88	82.43	79.70	89.76
1992	78.40	71.75	73.67	69.55	64.93	64.10	62.50	56.49	56.18	64.77	71.72	81.52	67.97
1993	71.61	72.45	67.07	59.77	67.35	68.13	76.40	84.18	86.58	83.02	85.56	87.33	75.79
1994	85.85	93.04	93.23	97.53	133.90	151.85	222.75	210.57	231.52	206.07	186.96	173.94	157.27
1995	177.23	175.07	185.75	180.30	177.18	170.89	157.22	163.21	141.49	132.08	129.09	110.47	158.33
1996	119.08	134.94	130.60	134.31	142.56	133.25	135.39	137.68	123.30	127.77	129.41	126.41	131.23
1997	146.18	188.62	212.96	199.22	318.50	227.15	190.57	193.46	196.29	169.40	161.38	183.32	198.92
1998	184.21	190.59	166.07	158.17	146.33	135.83	125.03	129.45	117.56	115.01	121.74	123.96	142.83
1999	123.07												123.07 1/
Other (Mild Arabicas)													
1990	75.83	84.01	93.96	93.73	92.02	88.26	86.48	94.42	94.92	91.41	84.84	89.89	89.15
1991	86.32	89.57	93.72	91.73	87.50	85.50	82.73	81.63	87.45	79.87	78.46	75.11	84.97
1992	72.99	67.88	69.96	65.23	60.14	58.38	57.58	52.42	52.73	61.40	67.36	77.46	63.64
1993	68.66	67.46	62.77	56.88	61.48	61.61	71.46	76.56	79.87	75.05	77.07	80.00	69.91
1994	77.21	82.69	85.57	89.23	121.97	142.57	217.67	198.07	220.10	198.06	180.76	167.47	148.53
1995	171.74	168.71	178.22	172.81	168.83	151.56	143.83	151.41	131.87	125.38	123.23	103.99	149.30
1996	109.38	122.71	119.05	122.01	128.56	124.46	120.47	122.49	114.05	120.62	119.90	115.01	119.89
1997	131.83	167.20	193.82	204.43	264.50	212.55	186.52	185.17	184.38	161.45	154.15	174.25	185.02
1998	175.04	175.87	154.82	147.08	134.35	121.56	113.86	119.89	108.07	107.07	113.84	115.54	132.25
1999	110.99												110.99 1/
Brazilian and Other (Arabicas)													
1990	70.36	77.59	86.17	87.45	86.31	82.94	78.94	90.25	92.20	85.78	77.46	80.17	82.97
1991	75.59	79.39	83.83	81.58	75.56	72.44	69.24	68.15	75.08	65.91	66.03	62.14	72.91
1992	62.03	58.05	59.60	54.94	51.11	49.08	48.53	46.40	49.43	59.64	64.64	74.39	56.49
1993	67.13	66.34	62.60	54.92	57.26	55.70	65.76	73.25	75.58	71.65	74.20	74.51	66.58
1994	71.42	80.14	84.72	87.14	118.37	136.43	211.81	192.38	212.73	191.21	172.83	159.73	143.24
1995	162.81	161.07	171.48	166.54	161.72	145.22	139.68	149.54	130.26	127.23	125.33	110.46	145.95
1996	127.54	144.05	140.99	132.92	134.76	125.44	106.93	108.28	103.10	105.77	103.76	103.71	119.77
1997	127.28	160.21	179.75	183.73	209.62	184.21	158.52	158.25	167.77	152.12	149.07	171.12	166.80
1998	179.83	177.78	154.84	141.11	124.89	104.09	96.22	101.92	92.76	91.32	96.67	100.28	121.81
1999	99.43												99.43 1/
Robustas:													
1990	50.52	51.30	57.88	57.39	55.03	52.38	51.47	55.10	57.09	58.05	56.79	57.04	54.99
1991	53.92	52.46	52.13	52.38	48.22	47.10	46.49	46.57	48.11	47.31	51.47	51.45	49.80
1992	49.44	43.22	43.08	42.32	38.79	38.07	39.60	39.92	42.39	45.50	49.08	52.09	43.63
1993	48.13	48.25	46.86	45.51	46.91	47.85	50.39	59.29	63.44	60.05	62.53	62.90	53.49
1994	60.91	62.25	66.46	72.64	96.05	113.31	164.65	162.68	182.95	170.09	154.19	130.48	119.72
1995	132.26	135.22	146.83	145.47	141.89	129.53	120.89	131.28	116.41	114.15	112.79	94.72	126.79
1996	91.99	98.99	91.99	91.45	92.10	86.46	78.14	80.16	74.83	72.97	70.51	63.08	82.72
1997	67.66	76.65	81.31	78.48	95.74	91.94	82.52	76.92	77.43	76.90	78.20	84.65	80.70
1998	86.03	85.79	84.67	90.60	92.64	84.55	78.40	79.98	80.88	80.36	80.40	82.82	83.93
1999	81.65												81.65 1/
Average 1976 OMs & Robustas													
1990	63.18	67.66	75.82	75.56	73.53	70.32	68.97	74.78	76.01	74.73	70.81	73.46	72.07
1991	70.12	71.02	72.93	72.06	67.86	66.30	64.61	64.19	67.78	63.59	64.96	63.28	67.39
1992	61.22	55.55	56.52	53.78	49.47	48.23	48.65	46.18	47.56	53.45	58.22	64.78	53.63
1993	58.40	57.86	54.82	51.20	54.20	54.63	60.93	67.93	71.66	67.55	69.80	71.48	61.70
1994	69.06	72.47	76.02	80.94	109.01	127.94	191.16	180.38	201.53	184.58	167.48	148.98	134.13
1995	152.01	151.97	162.53	159.14	155.36	140.55	132.36	141.35	124.14	119.77	118.01	99.36	138.05
1996	100.69	110.85	105.52	106.73	110.33	105.46	99.31	101.32	94.44	96.80	95.21	89.04	101.31
1997	99.75	121.93	137.56	141.46	180.12	152.25	134.52	131.05	130.91	119.18	116.17	129.45	132.86
1998	130.53	130.84	119.75	118.84	113.50	103.05	96.13	99.94	94.48	93.75	N/A	N/A	110.08
Composite 1979 ICA:													
1990	62.75	67.01	75.25	75.34	73.30	69.91	68.36	74.10	75.55	73.89	70.10	72.83	71.53
1991	89.39	70.55	72.47	71.45	67.47	65.58	64.31	63.38	66.86	62.83	64.30	63.07	66.81
1992	61.12	55.51	56.48	53.64	49.27	48.13	48.70	45.89	47.11	52.88	57.49	64.00	53.35
1993	58.14	57.32	54.76	51.38	54.18	54.54	60.61	67.69	71.64	67.78	70.03	71.53	61.63
1994	69.17	72.37	76.11	81.19	108.42	127.91	191.44	181.53	202.39	185.64	168.12	149.14	134.45
1995	152.08	152.24	162.73	159.59	155.96	141.66	132.71	141.70	124.76	120.02	117.99	99.57	138.42
1996	100.33	110.50	105.89	107.09	110.24	105.79	99.97	102.73	96.52	98.56	97.14	90.04	102.07
1997	100.03	121.89	137.47	142.20	180.44	155.38	135.04	132.63	132.51	121.09	118.16	130.02	133.91
1998	130.61	130.78	119.93	119.66	114.23	103.84	97.32	101.25	95.82	95.01	98.26	100.73	108.95
1999	97.63												97.63 1/

Source: International Coffee Organization (ICO).

1/ Cumulative through the latest month.

March 1999

Horticultural and Tropical Products Division, FAS/USDA

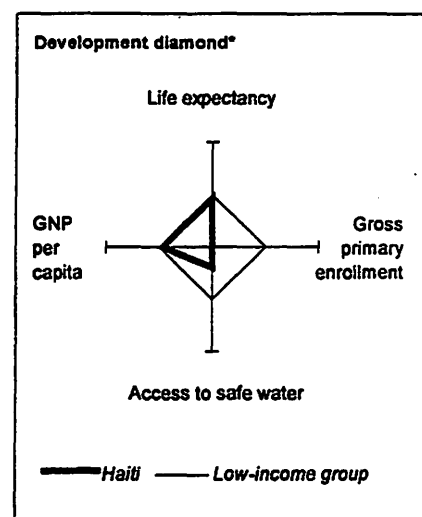
ANNEX II

Haiti at a Glance

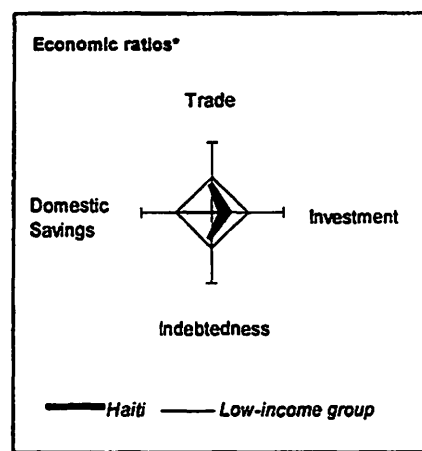
Haiti at a glance

ANNEX II

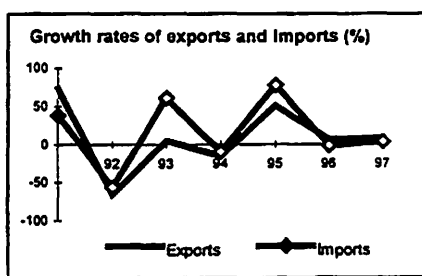
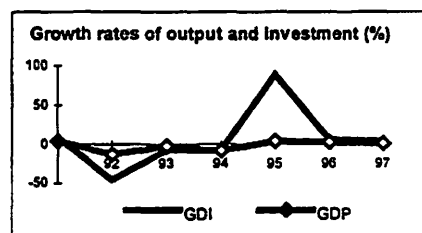
POVERTY and SOCIAL	Latin America & Carib.		
	Haiti	Latin America & Carib.	Low-income
1997			
Population, mid-year (millions)	7.5	494	2,048
GNP per capita (Atlas method, US\$)	330	3,880	350
GNP (Atlas method, US\$ billions)	2.5	1,917	722
Average annual growth, 1991-97			
Population (%)	2.1	1.7	2.1
Labor force (%)	1.8	2.3	2.3
Most recent estimate (latest year available, 1991-97)			
Poverty (% of population below national poverty line)	..	..	..
Urban population (% of total population)	33	74	28
Life expectancy at birth (years)	55	70	59
Infant mortality (per 1,000 live births)	71	32	78
Child malnutrition (% of children under 5)	28	..	61
Access to safe water (% of population)	28	73	71
Illiteracy (% of population age 15+)	55	13	47
Gross primary enrollment (% of school-age population)	..	111	91
Male	..	..	100
Female	..	..	81



KEY ECONOMIC RATIOS and LONG-TERM TRENDS	Latin America & Carib.				
	1976	1986	1996	1997	1998-02
GDP (US\$ billions)	0.88	2.2	3.0	2.8	3.0
Gross domestic investment/GDP	15.8	14.5	9.5	10.2	10.2
Exports of goods and services/GDP	16.8	15.0	8.8	8.4	8.4
Gross domestic savings/GDP	6.9	6.4	-8.4	-4.5	-4.5
Gross national savings/GDP	..	..	-2.7	3.3	3.3
Current account balance/GDP	..	..	-2.2	-0.7	-0.7
Interest payments/GDP	0.2	0.3	0.3	0.5	0.5
Total debt/GDP	11.7	31.8	30.3	37.5	37.5
Total debt service/exports	..	..	7.7	8.9	8.9
Present value of debt/GDP	..	..	15.1	..	..
Present value of debt/exports	..	..	129.4	..	..
(average annual growth)					
GDP	1.4	-2.0	2.7	1.1	3.0
GNP per capita	-0.4	-3.8	0.5	-0.9	1.8
Exports of goods and services	3.3	-1.3	6.6	7.7	5.8



STRUCTURE of the ECONOMY	Latin America & Carib.				
	1976	1986	1996	1997	1998-02
(% of GDP)					
Agriculture	..	..	32.5	31.4	31.4
Industry	..	..	19.3	20.4	20.4
Manufacturing	..	..	..	..	..
Services	..	..	48.2	48.1	48.1
Private consumption	84.7	83.7	102.1	97.4	97.4
General government consumption	8.5	9.9	6.3	7.0	7.0
Imports of goods and services	25.7	23.1	26.7	23.1	23.1
(average annual growth)					
Agriculture	-0.1	-1.9	-0.3	-2.4	-2.4
Industry	1.1	-4.7	11.0	6.6	6.6
Manufacturing	1.4	-4.1	2.7	0.5	0.5
Services	0.0	0.2	1.1	0.5	0.5
Private consumption	0.6	..	..	..	..
General government consumption	3.9	..	..	..	..
Gross domestic investment	3.6	-2.9	6.0	4.3	4.3
Imports of goods and services	2.6	7.9	-2.0	2.7	2.7
Gross national product	1.4	-1.9	2.9	1.0	1.0

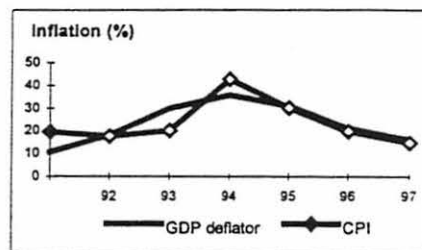


Note: 1997 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

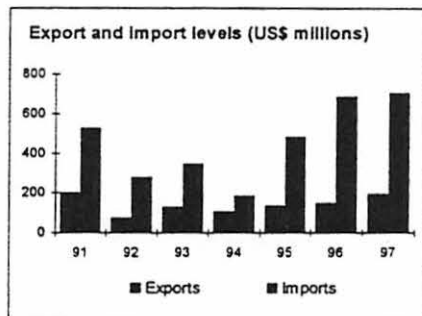
PRICES and GOVERNMENT FINANCE

	1976	1986	1996	1997
Domestic prices				
<i>(% change)</i>				
Consumer prices	..	3.3	20.0	14.9
Implicit GDP deflator	12.2	11.5	21.2	16.2
Government finance				
<i>(% of GDP, includes current grants)</i>				
Current revenue	6.7	8.5
Current budget balance	-2.1	1.9
Overall surplus/deficit	-7.6	-3.1



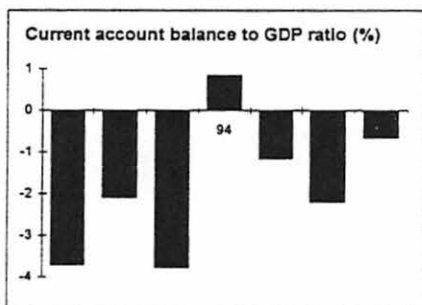
TRADE

	1976	1986	1996	1997
<i>(US\$ millions)</i>				
Total exports (fob)	124	216	148	196
Coffee	..	58	7	13
Other agriculture	..	10	1	1
Manufactures	..	130	127	159
Total imports (cif)	..	298	688	707
Food	..	69	220	200
Fuel and energy	..	51	79	75
Capital goods	..	63	92	92
Export price index (1995=100)	..	111	101	104
Import price index (1995=100)	..	93	92	91
Terms of trade (1995=100)	..	120	110	115



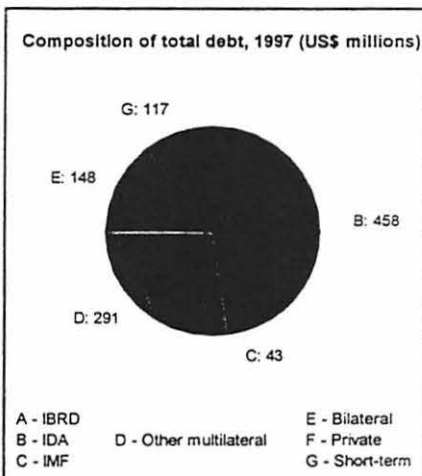
BALANCE of PAYMENTS

	1976	1986	1996	1997
<i>(US\$ millions)</i>				
Exports of goods and services	345	393
Imports of goods and services	847	878
Resource balance	-503	-485
Net income	-8	-12
Net current transfers	445	478
Current account balance	-66	-19
Financing items (net)	14	46
Changes in net reserves	51	-27
Memo:				
Reserves including gold (US\$ millions)	216	266
Conversion rate (DEC, local/US\$)	5.0	5.0	16.0	19.8



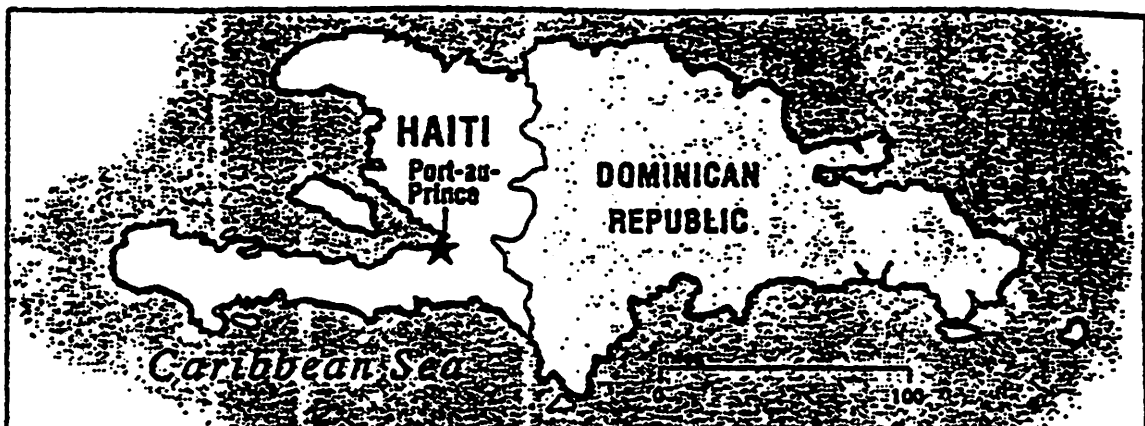
EXTERNAL DEBT and RESOURCE FLOWS

	1976	1986	1996	1997
<i>(US\$ millions)</i>				
Total debt outstanding and disbursed	103	710	897	1,057
IBRD	0	0	0	0
IDA	19	209	442	458
Total debt service	16	47	27	35
IBRD	0	0	0	0
IDA	0	2	7	8
Composition of net resource flows				
Official grants	19	95	158	550
Official creditors	28	36	96	83
Private creditors	7	-3	0	0
Foreign direct investment	8	5	4	3
Portfolio equity	0	0	0	0
World Bank program				
Commitments	22	0	0	34
Disbursements	13	25	67	40
Principal repayments	0	0	4	4
Net flows	13	25	63	35
Interest payments	0	2	3	3
Net transfers	13	23	60	32



ANNEX III

**Data On Refugees, Economic Aid and
Regional Economic Aid**



NIGHTMARE SCENARIO

REFUGEES

After dropping off dramatically in 1995, Haitian refugee numbers climb again:

1986	3,176
1987	3,588
1988	4,699
1989	3,368
1990	1,131
1991	9,941
1992	31,401
1993	2,329
1994	24,917
1995	1,969
1996	700
1997	587
1998	1,206
1999	255*

*January through February
Source: U.S. Coast Guard; Haitian rescue statistics for South Florida.

ECONOMIC AID

For Haiti, U.S. economic aid just keeps coming.

In millions of dollars

1986	\$76.1
1987	97.5
1988	39.5
1989	50.3
1990	59.5
1991	81.2
1992	83.8
1993	108.7
1994	79.0
1995	170.3
1996	122.2
1997	97.1
1998	101.3
1999	100.0
2000	105.0

Source: U.S. Agency for International Development

REGIONAL ECONOMIC AID

For Haiti, size doesn't matter: it gets the biggest slice of the U.S. economic aid pie in the Western Hemisphere.

Country	Total aid*	Per capita
Brazil	\$12.5 million	\$0.07
Dominican Republic	17.1	2.09
El Salvador	33.6	5.50
Haiti	70.0	8.97
Jamaica	9.5	3.80
Mexico	10.4	0.11
Nicaragua	30.0	6.66
Paraguay	5.4	1.04

*U.S. budget, rounded estimates, fiscal year ending Sept. 30, 1999. NOTE: The above does not include food aid which, for Haiti, totaled \$30 million in FY1999.

Source: U.S. Agency for International Development. Data compiled by Cox News Service

ANNEX IV

Data on Production and Producers

PRODUCTION

<u>CULTURE</u>	<u>SURFACE</u> (En 000ha)	<u>PRODUCTION</u> (en 000ha)	<u>RENDEMENT</u> T/ha
Cafe	135.0	35	0.26

PROVISION

Production totale	500.000	sacs de 60 kg
Consommation interne	300.000	“
Production exportable	200.000	“

Pilate	Plaissance	Dondon	Baptiste	Savanette	Thiotte	Jamel
20.000	16.000	15.000	20.000	10.000	60.000	16.000

Sacs de 60 kg.

Observations: 90% cafe naturel 10% cafe lave

Jacmel

Macary

Fond Jn Noel

PRODUCTEURS:

On peut estimer a 30.000 les producteurs travaillant dans le secteur cafe. Ils sont regroupes en associations et cooperatives.

Quantite Recoltee

500.000 sacs de 60kg dont 10% de cafe lave et 90% de cafe naturel

ALTITUDE

<u>Zones</u>	<u>Niveaux d'Altitude</u>
Baptiste	> 800 m
Savanette	> 1000 m
Thiotte	> 500 m
Dondon	> 500 m
Beaumont	> 500 m
Plaissance	> 600 m
Fond Jn Noel	
Jacmel	
Macary	> 800 m

Suite a l'identification de maladies et de depredateurs affectant les cafeieres, le Ministere de l'Agriculture eut a faire plusieurs essais de produits (fongicides - pesticides - insecticides) en lutte chimique.- Ces essais furent realises dans des plantations cafeieres familiales a Baptiste - Thiotte, Beaumont, Plaissance - Dondon.

Fongicides: Basamid G (dazomot a 98%)
 Rizolex (Tolclophan Methyl 500 g de m.a/kg. Fabricant Sumitono)
 Derosal 500 D (Carbodanzim 500 g de m.a/kg fabricant Hoechst)
 Atemis S (8g /kg de Cyproconazole et 800 g de soufre micronise)

Insecticides Tokution 1.5 P (1.5% de protisphos)
 Volaton 2.5 G (2.5% de phoxim)
 Lorshau 2.5 G (2.5% de Chlorpyriphas)
 Mocarp 5 G (5% d' ethoprop)
 Counter 10G (10% de terbuphos)

Dans l'objectif d'ameliorer la production, l'utilisation de fertilisants chimiques est courante dans certaines zones cafeieres. Le Ministere de l'Agriculture a utilise le NPK Zn 25.7.20.2. Les producteurs appliquent du 12.12.20 ou de l'engrais azotee (uree).

Varietes de Cafe

L'Arabica typica, introduite en 1725 en Haiti est la plus repandue. Toutefois on rencontre d'autres varietes telles: catura, Mondo Novo et Bourbon .

MISSION ORGANISMES INTERNATIONAUX

COHAN BAGE: Achetait le café lavé de plusieurs coopératives. Des primes étaient accordées à celles qui offraient un café de meilleure qualité. Pour celles qui avaient bénéficié d'avances, les membres attendent toujours leur ristourne.

IICA: Plusieurs associations regroupées sous l'appellation "Caféires Natives" bénéficient du soutien de l'IICA qui finance les stations de lavage en vue de l'obtention d'un café gourmet (HAITIAN BLUE) qui est vendu à un prix fixe au-dessus du marché à certains torréfacteurs américains.

BIT/PNUD: Ces derniers pensaient coiffer les coopératives caféières et cacaoières par une organisation dont le rôle et les fonctions n'ont pas été définis.

ANNEX V

Corporate Capabilities-EnterpriseWorks Worldwide

ANNEX V

Corporate Capabilities-EnterpriseWorks Worldwide

EnterpriseWorks Worldwide is a not-for-profit private organization created in 1976 on the initiative of the U.S. Congress. Propelled by the force of the free market and by moral imperative, the organization fights poverty through profit. It specializes in transforming small producers and processors into profitable entrepreneurs by adding value to small-scale farmers' products through cutting-edge technology, institutional strengthening, managerial training, quality control and direct access to buyers and markets. Simultaneously, it promotes environmentally appropriate practices as the best route to long-term sustainability of small businesses.

Our organization partners with large groups of small-scale farmers organized into cooperatives, unions, federations and associations, and through cooperation alliances with local and national institutions. Simply put, EnterpriseWorks enables such groups to develop and commercialize their potentially viable product while protecting the ecosystem through environmentally appropriate processing methods and recovery of biodegraded areas. The bottom line is to help those groups share more in the value of their product and eventually become entrepreneurs—the owners of their own self-sustainable, profitable businesses—without affecting the total area harvested or disrupting its biological diversity.

We are successfully applying this strategy in seven large groups of small-scale producers: high-value animal fiber and livestock herders in Bolivia, Zimbabwe and India; coconut processors in the Philippines; market gardeners in Mali and Senegal; metal and ceramic artisans (household energy) in Senegal and Guatemala; oilseed farmers in eastern and southern Africa; and, in recent years, growers of coffee, cacao and cashew in Central America.

Our Tree Crops division, in meeting EnterpriseWorks' challenge, has undertaken projects in:

- Costa Rica — Association ANAI Cacao Project
- Honduras — Cashew Project
- El Salvador and in Guatemala (with Starbucks Coffee Co. funds) — Coffee Projects
- El Salvador, Honduras and Nicaragua — Regional Coffee Marketing Program for Small-Scale Producers.

Soon we will expand our Coffee and Cacao Programs to other regions of the world, particularly to those where EnterpriseWorks already has an office and technical personnel.