

PROJECT CONCEPT DOCUMENT (PCD)

HAITI

April 22, 2005

I. BASIC DATA

Project Name:	Ennery-Quinte Agricultural Intensification Project		
Project number:	HA-L1009		
Outline:	April 4, 2005		
Project Team:	Division Chief: Robert Kaplan (RE2/EN2); Team Leader: John Horton (RE2/EN2); Diego Arias (RE2/EN2); Denis Corrales (COF/CHA); Marion Le Pommellec (COF/CHA); Maristella Aldana (LEG/OPR2); and Silvia Echeverría (RE2/EN2).		
Borrower:	Republic of Haiti		
Executing Agency:	Ministry of Agriculture, Natural Resources and Rural Development (MARNDR)		
Financing Plan:	IDB: FSO	US\$25 million	
	Total:	US\$25 million	
PTI/SEQ:	Qualifies by geographic and head-count criteria		
Tentative dates:	Analysis Mission	June 6, 2005	
	Loan Committee	June 23, 2005	
	Board	July 27, 2005	

II. FRAME OF REFERENCE

A. The agricultural sector

- 2.1 Haiti remains a predominantly rural country with a declining productive capacity to sustain those living in the countryside. Most rural dwellers live in extreme poverty, 59% earning less than US\$1 a day according to the most recent national household survey.¹ Although nearly two out of three Haitians live in rural areas, and most of those consider themselves to be farmers, the majority of their income (60%) now derives from sources other than agriculture. Their survival strategies primarily depend on remittances from family members abroad or in the capital, on

¹ The “Enquête sur les Conditions de Vie en Haïti” (ECVH) began in 2001 and published its findings in 2003 under the auspices of the Institut Haïtien de Statistique et d’Informatique (IHSI).

the sale of their labor to works projects or seasonal labor opportunities elsewhere in the country, and on petty commerce.

- 2.2 The declining capacity of agriculture to contribute to the national economy both in relative and in absolute terms, is the result of a process closely linked to demographic pressures, unsustainable patterns of agricultural production, decapitalization and low levels of human resource investment. The potential for expansion into arable areas has generally been exhausted throughout Haiti. Three-quarters of rural households have access to land, but the average size of holdings is merely 1.8 hectares per household. Stagnant production technologies, and scarcity of alternative employment opportunities for the predominantly unskilled rural labor force, have left little outlet for the demographic growth other than out-migration. These pressures, exacerbated by Haiti's mountainous topography and the movement of small-holders to increasingly fragile upland soils, have set in motion a pattern of deforestation, accelerated erosion, depleted fertility, reduced water retention and widespread silting of waterways. This in turn diminishes the carrying capacity of the land and contributes to the downward economic and environmental spiral.
- 2.3 A series of disasters has aggravated this vulnerable situation over the past two decades, including political upheavals, catastrophic floods and mudslides related to land use practices, destruction of the traditional swine population and the onset of the coffee rust disease, all in addition to the embargo of the 1990s. These emergencies have drained producers' meager savings, damaged the agricultural resource endowment and run down the scant infrastructure.
- 2.4 Long-term solutions to this situation must address population issues directly and must include substantially enhanced off-farm employment generation. However, for those who remain on the land, the only option is agricultural intensification and diversification in areas where increases in production and farmer income can be achieved in ways compatible with the preservation of the natural resource base. Haiti's most notable small-holder agricultural intensification success story, the mango industry, demonstrates the compatibility, the necessity, the feasibility and the potential of enhancing the resource base while increasing producer income.
- 2.5 **Lessons Learned.** The Bank has financed a series of agricultural investment projects in Haiti since the mid-1970s, predominantly focused on irrigated plains, particularly the Artibonite Valley (473/SF-HA, 690/SF-HA, 845/SF-HA). Their most consistent flaw in approach derives from the failure to engage the beneficiary groups in setting priorities during design and execution, and failure to mobilize their commitment to participate and to maintain investments. These projects tended to concentrate on irrigation infrastructure execution and paid insufficient attention to demonstrating tangible and sustainable increases in income while achieving a sense of ownership and maintenance of infrastructure works. The most recent operation in that area, the Agricultural Intensification Program (1490/SF-HA) that began implementation in 2004, takes into

consideration such lessons learned and has a far more participatory approach and one more squarely focused on raising household income through intensification.

- 2.6 The Bank has limited direct experience in the country with agricultural investment projects operating in the predominantly upland areas that characterize most of the Haitian territory. Reviewing the successes and failures of projects funded by other donors in Haiti and elsewhere that have attempted agricultural intensification in upland areas has yielded important lessons: (i) farmers must perceive relatively high financial returns to induce them to assume the additional costs and risks of intensification; (ii) intensification programs should not be limited to irrigation investments; (iii) local producer organizations must assume increasing responsibility for management of intensification efforts and infrastructure maintenance; (iv) in erosion-prone environments, upstream protection of watersheds is necessary to justify agricultural investments downstream; (v) various crops, particularly fruit trees, can offer high revenue hillside options compatible with watershed enhancement; and (vi) export-led strategies tend to bring more dynamic change to the sector than do import-substitution strategies.

B. Strategy of Haiti for the agricultural sector

- 2.7 The country's current National Agricultural Policy prepared by the MARNDR in 2004 stresses three main thrusts: (i) bolster rural infrastructure; (ii) support development of agribusiness chains (*filières*); and (iii) consolidate the emergence of input and service providers. The proposed project is consistent with Haiti's National Agricultural Policy, taking an integrated approach to irrigation and watershed protection infrastructure investments, support to producer groups in marketing and agricultural intensification services, and consolidation of input markets (water, seeds, fertilizers) as well as soil conservation and financial services.

C. Strategy of the Bank in the sector

- 2.8 The Bank's 2005-2006 Transition Strategy for Haiti stresses the importance of revitalizing agriculture within the third pillar of the Interim Cooperation Framework (ICF), focusing on promotion of economic recovery (Paragraph 5.12). The Bank, within the framework of the 2005-2006 Transition Strategy and the ICF, is supporting the MARNDR to implement programs that will extend the intensification process initiated through the *Agricultural Intensification Program* (1490/SF) to other geographic areas and to a broader variety of agri-supply chains (*filières*). The Bank's strategy also emphasizes that areas of opportunity will be assessed both from a production and marketing perspective, as well as based on the linkages to expanded value-added employment.
- 2.9 The proposed operation fits within the Bank's 2005-2006 Transitional Strategy for Haiti and the ICF, as well as within the framework of agricultural intensification efforts, support to the post-hurricane Jeanne recovery, and the

reduction of flood risk in the Gonaïves region. Furthermore, the project complements several Bank financial operations in execution and preparation. The Basic Infrastructure project (HA-0093) already under execution is designed to attend to the demand for specific complementary infrastructure needs such as those expected to emerge in the course of the project, particularly related to works bearing on the protection of downstream areas. The National Program of Flood Early Warning (HA-L1005), to be presented to the Board for approval in mid-2005, will include hydrological monitoring mechanisms for major population centers at risk and is expected to include Gonaïves. In addition to enhancing the safety of the population in the watershed and the city, the hydrological information will complement the information in the immediate project area. The Watershed Management project (HA-0033) proposed for 2006 approval is expected to strengthen institutional arrangements at the national level thus reinforcing efforts such as those of the Ennery-Quinte watershed protection measures. Meanwhile the Institutional Strengthening for Environmental Management (HA-L1006) being prepared for Board presentation in mid-2005 will lay the groundwork for the Ministry of Environment to fulfill its basic normative role with regard to environmental protection and enforcement.

- 2.10 **Coordination with the international community.** The project preparation process has benefited from the active participation of the Bank's technical team in both the ICF-Agriculture thematic group and the ICF-Gonaïves thematic group. The team has collaborated closely with the FAO during the extensive field work their Investment Center undertook at the beginning of 2005 to assess damages in the project zone, updating its original 1997-1998 work in the Ennery-Quinte area. The team also benefited from CEPAL's more general post-Jeanne damage assessment. The key bilateral donors collaborating with the Bank team have been the USAID team focused on hillside stabilization and relief to Gonaïves, and the GTZ financed activities implemented by Agro-Action Allemande in the Martino-Marmelade irrigation area.

D. Conceptualization of the Project

- 2.11 The project was originally conceived as part of a broader Agricultural Intensification Program (PIA), to support the MARNDR to identify and intensify agricultural development in areas of the country which demonstrated good sustainable agricultural potential. The PIA design has been guided by the principle that commercial, agronomic, environmental and user-group viability is highly interdependent in the case of intensification in Haiti. Persuading producers to intensify requires demonstrating a commercially viable financial return that more than off-sets the increased exposure to risks given greater outlay of capital and labor resources. Commercial and agronomic viability in turn relies on upstream soil and water conservation of Haiti's unforgiving topography and highly degraded watersheds. Meanwhile effective water resource and irrigation management downstream depends on the solidarity and level of organization of water-user groups convinced that their continued access to irrigation requires maintaining the system for all.

- 2.12 Thus the project design adopts a strategy to enable producers to achieve substantial gains from initial agricultural intensification, while beginning to strengthen existing water-user groups and protect the watershed. The latter entails protecting selected critical areas of the watershed with physical works while accelerating the rate of fruit tree propagation, and other vegetative cover, generating both attractive income and erosion control over the medium term.
- 2.13 The MARNDR's original geographic priority is referred to as the "Tranverse Region", comprised of three of Haiti's nine Departments, a broad swath extending from the Northwest and the Artibonite to the Central Plateau. After detailed analysis, the Ennery-Quinte zone was selected as one of the priority first phase areas, given favorable production conditions, a tradition of smallholder collaboration, absence of land tenure conflicts and the presence of a series of nine irrigated perimeters built in the 1940s and maintained until the mid-1980s. Ultimately the first PIA investments approved by the Government were situated in the Artibonite Plain, financed by the Bank in 2003 (1490/SF-HA).
- 2.14 The Ennery-Quinte project will engage producers initially by concentrating on their most pressing production needs, providing guidance and access to improved inputs and services, including staple crop seeds and other production and post-harvest inputs. This approach is designed to build trust based on results in their core production, thus expanding the space to venture increasingly into higher value products beyond staple crops. Building on the core of existing high value crop production present in the vicinity, the project will pursue two mutually reinforcing approaches to increase farmer income from crops more lucrative than their basic grain crops. The first approach depends on expanding the total area which can support multiple cropping in conjunction with irrigation rehabilitation investments, since the relative share of these "garden" crops increases during off-season production periods, namely the second and third crops. The second thrust builds on a series of measures aimed at introducing higher revenue per cultivated area. Market linkage assistance will allow producers to tap into expanded demand or to capture a premium, typically for export markets.
- 2.15 Tree crop intensification offers the dual advantages of high revenue generation with high environmental protection even in critical upper watersheds. Although demand for mangos will likely predominate, grafting will extend to avocado and citrus, and seedling production will include these as well as upland perennial crops such as coffee and tamarind, all based on their potential as well-adapted erosion stabilizers with robust revenue streams. Furthermore the project will utilize access to these inputs as a form of leverage to engage farmers in awareness sessions (known as "**animation-sensibilisation**" sessions) on intensification, marketing and conservation.
- 2.16 To preserve its productive potential, the Ennery-Quinte area requires significant preventive and remedial measures. The traditionally favorable growing conditions in the Ennery-Quinte irrigated perimeters owe in good measure to the natural upper and lower watershed catchment system, a system that is increasingly eroded

and diminishing in usable water supply. The growing areas depend critically on continued adequate water availability. Furthermore the state of erosion has exacerbated increasingly destructive run-off patterns, contributing critically to the lethal floods of September 2004 in Gonaïves as well as in the immediate vicinity. The floods and massive mudslides in the wake of Jeanne severely damaged much of the catchment and diversion systems.

- 2.17 **Conditions in the Project Zone.** The Ennery-Quinte region refers historically to an area of 450 km² defined by three smaller watersheds, Ennery-Marmelade, La Branle and Bassin Magnan, all of which flow into the Quinte river and drain into the Plain of Gonaïves. The highest point of the watershed lies above 1000 meters near Marmelade. The most critical areas of the Ennery-Quinte watershed to stabilize constitute some 15,000 ha in all three watersheds. The upper reaches situated around 1000 meters near Marmelade receive nearly 2000 mm of rainfall annually while the area near Gonaïves receives an average of 560 mm.
- 2.18 Those areas nearest the irrigable lands exhibit very high population densities with average holdings around three quarters of a hectare per household while those higher in the watershed hold an average of 2.5 ha per household. The irrigated areas in the project zone account for roughly 2000 hectares. Levels of poverty commonly observed in rural Haiti typify the entire area with more than half of the beneficiaries living below the poverty line.
- 2.19 The Departmental branch office of the MARNDP for the Artibonite is located near the project zone north of Gonaïves. While their resources have traditionally been limited, they have demonstrated during the current administration good technical expertise and commitment to finding ways to work with the beneficiaries of the Ennery-Quinte area, particularly regarding watershed protection.
- 2.20 Market access from the Ennery-Quinte area is facilitated by the fact that the national highway skirts the entire area from Gonaïves to Ennery and beyond as it climbs north over the mountains toward Cap-Haïtien. Additional access roads penetrate the area, except for the more remote areas of the watershed. The area near the town of Marmelade at the top of the watershed has emerged during the last several years as a dynamic hub of demand, processing coffee, citrus and bamboo for furniture. Furthermore a USDA-certified export packing house opened in the region during the last two years, purchasing its mangoes and ethnic horticulture products from the area and looking to source new expanded volumes. Unlike export operations elsewhere around the Caribbean Basin, Haiti is the only one based almost exclusively on products from small-holder producers and rural assemblers. They form the backbone of the mango supply system that is the basis for diversified produce processing and export. One of those packing houses is putting into operation this year what will be the single largest individually quick-frozen (IQF) processing plant in Hispaniola looking to expand the range and volume of product it will source from around the country.

III. THE PROJECT

A. Objectives and description

- 3.1 **Objective.** The proposed operation seeks to increase the income of households in the Ennery-Quinte project zone, while reducing the risk and severity of further flood and mudslide damage in the Gonaïves area. The operation will permit the beneficiaries to intensify and diversify their agricultural production in a sustainable manner in the Ennery-Quinte watershed.
- 3.2 **Description.** The investments foreseen will seek to stabilize critical areas of the watershed, to rehabilitate a series of small-scale irrigation systems, including those damaged by Hurricane Jeanne in 2004, and to intensify agriculture development through improved marketing, production and water-user group management. The area referred to as the Ennery-Quinte lies in the foothills to the north of the Artibonite Valley some twenty kilometers northwest of Gonaïves (see par. 2.17).

B. Structure of the Program

- 3.3 The Ennery-Quinte Agricultural Intensification Project is comprised of three components. The first concentrates on production and marketing services, the second on watershed management and flood protection, and the third on the rehabilitation of existing small-scale irrigation grids. Within each component, the project will include resources for the significant technical assistance and community outreach effort which will be executed in coordination to organize and mobilize producer groups to engage in all of the activities and investments foreseen in the project.
- 3.4 **Component 1: Agricultural Intensification and Market Linkage (US\$6 million).** The support to agricultural production and marketing services focuses on three areas of intervention: improve delivery of agricultural inputs and services; expand high revenue crops and market linkage; and accelerate fruit tree production. The two sub-components provide technical assistance and selected agricultural inputs.
- 3.5 **Crop intensification and market linkage.** This sub-component will finance a technical assistance team to improve agricultural input and service delivery. The first step will make available seeds, selected and treated against seed-born diseases, and fertilizer at the rates prevailing in the country. The technical assistance team will also coordinate with existing micro-financial service providers to increase access and coverage, and will assist the producers groups to establish an agricultural input revolving fund mechanism with revenue from sales from their output.

- 3.6 The technical assistance will focus on expanding high value crops and market linkage. Improved market linkage represents the second path to increased high revenue production. The project will finance a technical assistance team that will work with producers to coordinate more closely with buyers in order to identify new varieties, timing, and handling or other requirements.
- 3.7 **Accelerate fruit tree production.** This sub-component will introduce fruit grafting technologies largely unfamiliar to farmers in the area but which have demonstrated success in other areas of Haiti over the last 15 years. The technical assistance team will establish a local orchard in order to produce the budwood both for grafted seedlings and the source material for top-working mature trees to transform them to commercial varieties.
- 3.8 **Component 2: Watershed Management and Flood Protection (US\$9 million).** The two sub-components provide for selected light-engineering works for physical barriers in targeted watersheds, tree, plant or grass inputs for soil stabilization and technical assistance for watershed management.
- 3.9 **Flood Protection Measures.** This sub-component will finance targeted flood abatement works to avert the levels of destruction registered from the 2004 Jeanne storm. These diversion structures will be designed to work in tandem with the longer-range preventive watershed management measures to reduce the destructive force of run-off. Light engineering measures will include physical barriers such as gabions, contour structures, dry walls, check dams, gully plugs and vegetative barriers.
- 3.10 **Watershed Management.** This sub-component will combine two tools to combat watershed degradation and begin to restore its absorptive capacity. The project will finance ravine rehabilitation and soil conservation measures as the immediate line of attack. For the medium term, through technical assistance, the project will utilize tree planting and grafting techniques for the intertwined purposes of reforestation and income generation. In each of these watersheds, the project will consult with local communities and technicians to design an integrated local watershed plan ("*document de gestion de terroir*"), which will earmark techniques, types of vegetative cover and areas to be treated. The plan will specify exact beneficiaries and their commitments to maintain the investments.
- 3.11 **Component 3: Rehabilitation of Small-Scale Irrigation Systems (US\$8 million).** The project will finance the repair and rehabilitation of critical portions of the existing small-scale irrigation systems that make up the Ennery-Quinte network built in the 1940s. This entails both physical works and the accompanying technical assistance to reinforce existing water-user groups, their management of the water resource and maintenance of irrigation networks, in order to expand the reliability and effective area of coverage of the irrigation system. No new perimeters will be constructed in the project zone, hence the ability to proceed more rapidly. The works will require supervision and implementation by engineering firms.

C. Cost and financing

- 3.12 The following table presents a preliminary distribution of the estimated costs to implement this agricultural intensification project. These costs will be estimated with greater precision during the analysis of the operation.

Table III-1. Costs and Financing
(in thousands US\$)

Category or Component	BID/FSO	Share
I. Administration and supervision	1,730	7%
II. Components	23,000	92%
1. Agricultural Intensification and Market Linkage	6,000	24%
2. Watershed Management and Flood Protection	9,000	36%
3. Rehabilitation of Small-Scale Irrigation Systems	8,000	32%
III. Financial Costs	270	1%
IV. Total Costs	25,000	100%

IV. EXECUTION OF THE PROGRAM

A. The borrower and executing agency

- 4.1 The Borrower will be the Republic of Haiti. The Republic of Haiti will implement the Program and perform its obligations under the loan agreement through the MARNDR.

B. Execution and administration of the Program

- 4.2 The same Program Coordination Unit (BCP) currently implementing the Agricultural Intensification Program (1490/SF-HA) will serve as the project executing unit. The BCP has demonstrated its efficiency in rapid project start-up. Its central project administration and procurement functions will remain in its Port-au-Prince Office in MARNDR. The BCP currently maintains a field office in Pont Sondé near the Artibonite site and it will open a new field office on the outskirts of Gonaïves, near the Ennery-Quinte project site in order to carry out the project. The Operating Regulations (*Règlement Opérationnel*) approved by the Bank and used by the BCP to administer the existing PIA (1490/SF-HA) contains many of the key elements required for the Ennery-Quinte PIA administration, and will be modified to suit the specific needs of the Ennery-Quinte project and approved by the Bank.
- 4.3 The BCP will report directly to a *Comité de Pilotage*, composed of senior technical advisors to be designated by the MARNDR. The regional office of the MARNDR responsible for the Artibonite Département, the Direction Départementale de l'Agriculture (DDA), will serve as the principal coordinating body between the MARNDR and the Ennery-Quinte BCP field office, just as the DDA does currently with the Pont Sondé field office. The DDA headquarters is located near the project area and its technical personnel have participated actively

in the design process, particularly with regard to watershed management techniques.

C. Execution period and disbursement schedule

- 4.4 Project implementation will extend over a five-year period. The estimated schedule of disbursements is presented in table IV-1.

Table IV-1. Estimated schedule of disbursements

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB	10%	20%	30%	25%	15%	100%

D. Monitoring and evaluation

- 4.5 The project will utilize a full complement of monitoring and evaluation measures building upon the existing baseline established during project preparation. In addition to those to gauge socio-economic impact at the household level, various techniques will be used to measure the impact on watershed improvements. Key among the latter are those presented at length in the Environment and Social Impact Report (ESIR). These include: (i) continuous hydrological monitoring; (ii) establishment of a watershed model; (iii) establishment of a water and soil quality baseline; and (iv) completion of a study on tree and other crops that may play an important role in the stabilization of slopes and the control of soil erosion while at the same time affording sufficient commercial opportunity to offer a viable alternative to deforestation.

V. DEVELOPMENT IMPACT

A. Benefits and beneficiaries

- 5.1 The significant benefit streams set in motion by the proposed project derive from increased household income and the value restored to the land and water resource base through the protective effects of planting trees and other perennial crops in hillside and uplands areas, and through direct investments in ravine stabilization. The project area includes an estimated 18,000 ha of agricultural land (irrigated and non-irrigated) and approximately 10,000 farmers (1.8 ha/farmer), or over 40,000 beneficiaries. The initial appraisal also estimates that the equivalent of 4,500 additional full-time jobs will be created in the irrigated farm sector alone. Moreover, the distribution of labor needs over the year will be improved through the increase in production in off-season periods. Furthermore, the project will create linkages to value-adding business development in input supply, transport, crop handling, packing, processing and marketing. The project will also produce benefits to the broader population downstream in the Gonaïves area by lowering the risk and severity of floods and mudslides through protection of the Ennery-Quinte watershed.

- 5.2 The most fundamental direct benefit of the project will be the increase in household income. The project will increase household income substantially in the project zone. Revenues from field crops are expected to increase significantly per unit area in the best growing areas, while revenues from tree crops will increase income generation throughout the non-irrigated areas. This will result in direct immediate improvements to family welfare such as improved nutrition and health, as well as enhancing the longer-term household well-being through improved basic health and education of children.

B. Expected results

- 5.3 Through the expected substantial increase in household income, the project seeks to generate a series of benefits for families, the community and their environment, including a substantial increase in employment, a heightened cohesion amongst water-user groups and enhanced protection of the natural resource base. At the same time, the project will contribute directly to the protection of the Ennery-Quinte watershed and of the direct beneficiaries and broader population downstream, lowering the risk and severity of floods and mudslides in the area, including heavily populated areas in the Gonaïves vicinity. As a project linked to the Agricultural Intensification Program (“PIA”, 1490/SF-HA), the results of a model of intensification in a zone distinct from the Artibonite Plain, is expected to generate lessons learned for a variety of other zones of Haiti, with particular relevance for areas with partially hillside production and small-scale irrigation in a smaller watershed.

C. PTI/SEQ classification

- 5.4 The project qualifies as a poverty-targeted investment according to the Bank’s Eight Replenishment agreement (document AB-1704), as amended by document GN-1964-3 of June 3, 1997, since over 50% of the population affected is below the poverty threshold, applying either head-count or geographic criteria. The primary direct beneficiaries are small-holders and laborers whose income falls well below the poverty threshold.

D. Environmental and social impacts

- 5.5 The Environmental and Social Impact Report for the Ennery-Quinte project was approved by the CESI as part of the original PIA (HA-0016) preparation. The ESIR thoroughly addresses the baseline situation in the project zone, the environmental and social risks and the monitoring and mitigation measures required to maximize the project's viability.
- 5.6 The project design derives in large measure from the conviction that for any agricultural intensification effort to succeed in fulfilling its objective to increase small-farmer income, it must mobilize widespread social participation and link productivity gains to stewardship of the natural resource base. The project design has internalized these fundamental prerequisites throughout. The project’s

approach to irrigation and downstream agricultural investments systematically builds on this commitment in the formation of water user committees and links these investments to watershed protection.

- 5.7 The primary environmental risk highlighted in the ESIR relates to the availability of water to allow intensification and the downstream impacts of increased water use. The main social risk concerns whether the project benefits will remain available to all segments of the community, most notably women.
- 5.8 A number of measures have been incorporated into the project to address these risks and to mitigate negative impacts. The manner in which actual investments proceed will be governed by procedures which actively promote social and environmental soundness as embodied in the Environmental and Social Management Plan (ESMP) contained within the ESIR. The MARNDR will formally adopt guidelines consistent with the ESMP as part of its Operating Regulation to be approved as a pre-condition to first disbursement of the loan.
- 5.9 While the MARNDR will bear the responsibility for execution of the project under the terms of the loan contract, the Ministry of Environment's (MOE) mandate does mean that it oversees the promulgation of environmental norms. As a relatively new Ministry with a weak institutional base, it has a limited ability to fulfill its mandate. As the Bank (HA-L1006) and other donors collaborate to strengthen the MOE, the project will actively pursue coordination with it in matters pertaining to environmental guidelines as foreseen in the ESMP.
- 5.10 The environmental and social operational norms to be adopted and followed during project implementation shall apply the principles embodied in the ESMP in the following key areas: (i) community outreach; (ii) extension and training regarding agricultural inputs; (iii) phyto-sanitary controls; (iv) watershed protection; (v) small-scale irrigation environmental and social issues; and (vi) monitoring and evaluation requirements.

VI. RISKS AND ISSUES

A. Civil unrest and commercial disruptions

- 6.1 The current degree of insecurity and civil disturbances prevailing in Haiti has not disrupted activity in the immediate Ennery-Quinte area. Disorder in Port-au-Prince does occasionally limit some commercial activity, mainly through transportation problems. The possibility of heightened future disruptions in Gonaïves or Port-au-Prince poses a risk, including rising to the level of port or airport closures to freight or, in the worst case, an embargo as occurred in the 1990s. Within the project area the greatest security risks include the possibility of increased banditry or the emergence of land conflicts as land values rise as intensification proceeds. At the level of the BCP, the greatest risk would be any major upheaval or shifts that could undermine the effective management that currently characterizes that unit.

B. Natural disasters

- 6.2 The catastrophic damage of Jeanne in September 2004 demonstrates the risk of the most devastating possible event. Even lesser storms can wreak floods and mudslides, given the current fragile state of the surrounding watershed. On the other extreme, the zone is also subject to increased risk of water shortages given the diminishing absorptive capacity of the watershed and impaired replenishment of aquifers and some encroaching desertification. The project design seeks to offset these risks at least in the medium and longer term through its direct watershed stabilization measures, contributing both through enhanced soil absorptive capacity and direct physical barriers to run-off (such as gully plugs) in high risk areas. Coordination with the National Program of Flood Early Warning (HA-L1005) will help reduce the risks of loss of lives should an event of life-threatening proportions occur. No additional financial contingency is deemed justified within the loan resources to respond to the physical damage that could occur in such an event. However, the project execution structure would have the capacity to deploy management and technical resources to assess damages and recommend measures should a disaster occur.
- 6.3 The outbreak of significant plant or animal diseases represents a threat, as occurred in the case of African swine fever in the 1980s. Less drastic diseases or infestations represent serious threats to individual crops or classes of crops, as is the case of the mealy bug or white fly infestations. These risks can likely be managed with appropriate attention to animal and plant disease control as part of the technical assistance and with the institutional strengthening of the phyto-zoo-sanitary service foreseen as part of the upcoming Rural Economy Support Program (HA-L1003).

C. Economic instability

- 6.4 The greatest current economic risk to project feasibility comes from the high levels of inflation over the last two years. This could constrain investment, particularly given the relatively long turn-over in cash-flow involved in intensification efforts requiring financial services across a crop season. Additional risks include failures in input markets or abrupt changes in output markets. Disruptions or a lack of willingness on the part of micro-financial services to expand coverage in the area would constrain expansion. The technical services program will address these eventualities through risk management techniques, such as supplier-producer or buyer-producer contracts as part of market linkage.

D. Exceptions to Bank policies

- 6.5 No exceptions to Bank policy are proposed.

VII. PROGRAM PREPARATION AND ACTION PLAN

- 7.1 February 23, 2005, the Government formally requested the mobilization of the investments pertaining to the Ennery-Quinte zone and watershed. The existence of the detailed project documentation from the Agricultural Intensification Program (HA-0016) as it was originally designed in 1998 has permitted an accelerated preparation process. The Bank deployed a team of individual consultants to assist in the field in March and April to revise the key original technical studies. Even before the official request, the FAO/Investment Center fielded a technical team to review the state of the Ennery-Quinte project area in January and February 2005. Their detailed updated analysis of the infrastructure and economic activity will serve as inputs to the Bank's technical team.
- 7.2 The new project loan document is to be drafted in May to be appraised in June and presented to the Board for approval in July. The non-reimbursable technical cooperation planned for the preparation of rural economy projects in Haiti (HA-T1026) will include resources to assist in the establishment of the new Ennery-Quinte unit and the start-up of project implementation.

ENNERY-QUINTE AGRICULTURAL INTENSIFICATION PROJECT (HA-L1009)

LOGICAL FRAMEWORK

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS/RISKS
GOAL			
Increase the income of households in the Ennery Quinte project area.	<ul style="list-style-type: none"> Increase household income in the project zone by X% by the end of the project. 	<ul style="list-style-type: none"> Project's socio-economic baseline survey and monitoring records. 	<ul style="list-style-type: none"> Assistance not be interrupted by significant political unrest or economic upheaval. Farm-gate price levels remain relatively stable. Neither political or natural disasters nor devastated plant or animal health outbreak will significantly undermine the intensification process.
PURPOSE			
Enable producers to intensify agricultural production in ways which are sustainable both commercially and in terms of the natural resource base.	<ul style="list-style-type: none"> Increase in crop yields and margins by X % the end of the project. Increase by X% water use efficiency in project zone. Increase by X% the volume and quality of agricultural products marketed and/or exported. 	<ul style="list-style-type: none"> Project's socio-economic baseline survey and monitoring records. BCP's records. Hydrological monitoring reports USDA/APHIS export pre-clearance certification records. External trade statistics from Customs. Records of the private traders of fresh or processed product from the area. 	<ul style="list-style-type: none"> Commercial buyers continue to exhibit a strong demand for high-value agricultural products. Exporters continue to maintain their pre-clearance program for fresh produce. Neither labor-intensive works projects in the vicinity nor food aid programs significantly undermine the supply of labor nor the market for agricultural products. Major land conflicts do not arise in the selected project zone.
COMPONENTS			
1. Agricultural Intensification and Market Linkage <ul style="list-style-type: none"> * Enhanced market linkage * Expand high value crops * Accelerate fruit tree production. 	<ul style="list-style-type: none"> Increase seed quantity and quality delivered by X% and X% respectively by the end of year 3. Increase by X% in production of high-value products and X% of income 	<ul style="list-style-type: none"> Germination tests and in-field monitoring. Records of the private traders of fresh or processed product from the area. Census and inspection of trees. 	<ul style="list-style-type: none"> Current seed suppliers are able to fill the orders in a timely fashion. No major interruptions in seed availability. Producers progressively convinced of

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS/RISKS
	<p>generated by producers by the end of the project.</p> <ul style="list-style-type: none"> • Increase in X% number and X% of share of the tree population which has been improved with grafting or grafted seedling plantings by the end of the project. 	<ul style="list-style-type: none"> • Reports of origin of product from shippers/processors/exporters. 	<p>the value of improved seeds, grafting and grafted seedlings.</p>
<p>2. Watershed Management, Flood Protection and Restoration</p> <ul style="list-style-type: none"> * Restoration and Flood Protection * Watershed management. 	<ul style="list-style-type: none"> • X% increase in tree cover in upper watersheds by the end of the project. • X hectares of fragile areas stabilized and soil fertility improved by the end of the project. 	<ul style="list-style-type: none"> • Watershed model monitoring reports 	<ul style="list-style-type: none"> • Increased income from planted and grafted fruit trees upstream is sufficient to induce the population to protect them as well as anti-erosive physical works.
<p>3. Rehabilitation of Small-Scale Irrigation Systems</p>	<ul style="list-style-type: none"> • X hectares rehabilitated and X% increase in the efficiency of water use in the perimeters by the end of the second year. • X % of water user groups organized and with formal agreements on fee structure and scope of local management responsibility by the end of the third year. • X% decrease in siltation levels by the end of the third year. 	<ul style="list-style-type: none"> • Hydrological and siltation monitoring reports • Measurement of siltation levels as part of watershed model monitoring. • User group records and observed levels of organization. 	<ul style="list-style-type: none"> • Adequate supply of water confirmed by hydrological studies to proceed with substantial portion of projected area of perimeters. • Local population demonstrates commitment to increased degree of management of the small-scale works.

**ENNERY-QUINTE AGRICULTURAL INTENSIFICATION PROJECT
(HA-L1009)**

ESTIMATED PREPARATION COST

1. MISSIONS (US\$20,000)		
Orientation Mission	5 person-weeks	
Analysis Mission	3 person-weeks	
Negotiation Mission	2 person-weeks	
2. ADMINISTRATIVE RESOURCES FOR OFFICE WORK		
Team Leader	12 person-weeks	
Team Members	8 person-weeks	
Attorney	2 person-weeks	
3. CONSULTANTS (US\$100,000)		
Financed by Administrative Budget during design and appraisal:		US\$60,000
Financed by FSO Net Income for start-up preparation:		US\$40,000