

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

HAITI

MODERNIZATION OF AGRICULTURAL HEALTH

PUBLIC SERVICES

(HA-L1094)

GRANT PROPOSAL

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Required	
1.	Plan of Activities for first disbursement and the first 18 months of implementation http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38776289 http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38801609
2.	Monitoring and Evaluation Arrangements http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38780663
3.	Procurement Plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38781325
4.	Environmental and Social Management Report (ESMR) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38781328
Optional	
1.	Economic Analysis of the Program http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38776304
2.	Detailed Budget per Output http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38776268
3.	OIE Assessment (2010) and Gap Analysis (2012) Reports (Animal Health) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36650178 http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36781648
4.	IICA Assessment Report – 2011 (Plant Health) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36650238
5.	Strategic and Investment Plan for Agricultural Health and Food Safety 2014-2019 (SPS Plan) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38780399 http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38780364 http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38780368 http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38780373 http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38780394
6.	Essential staff needed in the departmental agricultural health centers http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38801623
7.	Full Results Matrix with Outputs http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38780965

ABBREVIATIONS

AOP	Annual Operation Plans
CICDAZ	Food and Zoonoses Control Interministerial Committee (<i>Comité Interministériel de Contrôle des Denrées Alimentaires et des Zoonoses</i>)
CSF	Classical Swine Fever
EA	Executing Agency
FY	Fiscal Year
GDP	Gross Domestic Product
GoH	Government of Haiti
Ha	Hectare
IICA	Inter-American Institute for Cooperation on Agriculture
LVCQAT	Tamarinier National Veterinary and Food Quality Control Laboratory (<i>Laboratoire Vétérinaire et de Contrôle de Qualité des Aliments de Tamarinier</i>)
MARNDR	Ministry of Agriculture, Natural Resources and Rural Development
MCI	Ministry of Trade and Industry (<i>Ministère du Commerce et de l'Industrie</i>)
M&E	Monitoring and Evaluation
MSPP	Ministry of Public Health and Population (<i>Ministère de la Santé Publique et de la Population</i>)
OIE	World Organization for Animal Health
PBG	Policy-Based Grant
PR	Progress Reports
PVS/IICA	Performance, Vision and Strategy (IICA assessment tool)
PVS/OIE	Performance of Veterinary Services (OIE assessment tool)
SPS	Sanitary and PhytoSanitary
SPS Plan	GoH's Strategic and Investment Plan 2014-2019 for the Modernization of the Agricultural Health and Food Safety Services
UPS	Agricultural Health Unit of the MARNDR (<i>Unité de Protection Sanitaire</i>)
UPMP	Procurement Unit of the MARNDR (<i>Unité de Passation des Marchés Publics</i>)
UTE	Execution Technical Unit

PROJECT SUMMARY
HAITI
MODERNIZATION OF AGRICULTURAL HEALTH PUBLIC SERVICES
(HA-L1094)

Financial Terms and Conditions			
Beneficiary: Republic of Haiti Executing Agency: Ministry of Agriculture, Natural Resources and Rural Development (MARNDR)		Amortization period:	N/A
		Original WAL:	N/A
		Disbursement period:	60 months
		Grace period:	N/A
Source	Amount (US\$)	Supervision and inspection fee:	N/A
IDB (Grant Facility)	14,000,000	Interest rate	N/A
Local	2,000,000	Credit fee:	N/A
Total	16,000,000	Currency:	US Dollars
Project at a Glance			
<p>Project objective: The general objectives of the operation are to reduce agricultural and livestock losses as well as to increase exports of Haitian agricultural products. The specific objectives are to strengthen the government's capacity to provide integrated, decentralized and sustainable agricultural health services, and to improve the plant and animal health conditions in the country.</p>			
<p>Special contractual conditions prior to first disbursement: (i) the approval of the Agricultural Health Unit (UPS, for its French acronym) human resources plan, which includes the UPS functional regulations, organizational chart and staffing of technical, administrative and financial departments (§3.2); (ii) the hiring or assignment of a planning, monitoring and evaluation specialist, of a human resources specialist, and of an administrative and financial manager, all financed by the proposed operation (§3.2); (iii) the creation of the Program Steering Committee (§3.3); (iv) the approval of the Operation Manual by the Steering Committee (§3.9); and (v) the signature of a Ministerial Order from the Prime Minister, to make official the establishment of the Food and Zoonoses Control Interministerial Committee (CICDAZ, for its French acronym) under the Prime Minister's Office (§3.4).</p>			
<p>Special contractual conditions prior to execution: (i) assignment of essential staff required to provide basic agricultural services on the field will be a condition prior to the signature of contracts for works for the execution of Component 1 (activity i: establishment of five health and food safety centers) (§3.5); (ii) signature of the contract with the firm that will design the cost recovery mechanisms will be a condition prior to the execution of Component 2 (activity vi: Fruit Fly control program) and Component 3 (activity ix: Classical Swine Fever and Teschen disease control program) (§3.6); (iii) evidence that mitigation measures included in the Environmental and Social Management Plan (ESMP) have been implemented will be a condition prior to the execution of Component 3 (activities v, vi and ix: animal epidemiovigilance activities and Classical Swine Fever and Teschen disease control program) (§2.3); and (iv) assignment of a manager, in charge of operations and resources management at the Tamarinier National Veterinary and Food Quality Control Laboratory (LVCQAT), will be a condition prior to the execution of Component 4 (§3.5).</p>			
<p>Special disbursement: an initial disbursement for up to US\$500,000 will be made to the extent the Beneficiary fulfills to the Bank's satisfaction all the standard general conditions prior to disbursement set forth in grant agreements, except for: (i) the submission of the initial execution report; and (ii) evidence of reliable financial information systems and internal control mechanisms (§3.10).</p>			
<p>Exceptions to Bank policies: None</p>			
<p>Project qualifies for: SEQ [X] PTI [X] Sector [X] Geographic <input type="checkbox"/> Headcount <input type="checkbox"/></p>			

I. PROGRAM DESCRIPTION AND RESULTS MONITORING

A. Background, Problem Addressed and Justification

- 1.1 **Structure and performance of the agricultural sector.**¹ Agriculture plays a dominant role in the Haitian economy, contributing to 22.5% of GDP (Fiscal Year [FY] 2012-2013), accounting for approximately 50% of overall employment, 66% of employment in rural areas, and 75% of employment in low income households. It represents the principal means of subsistence for over one million families, contributing to about 50% of the total households' income. Although some niche products (mango, coffee, cocoa, lobster, essential oils) have demonstrated to have a potential in foreign markets, with official exports slightly growing for the past four years and reaching almost US\$50 million in 2012 (13.4% of total Haitian exports), a comparative analysis of yield levels on relevant crops demonstrate that land productivity in Haiti is lagging relative to other countries in the region (see Table 1). Given the country's high dependence on agriculture, the decline of the agricultural GDP in the last two decades (with an average annual growth rate of -0.6% since 1990) has contributed to dramatic impoverishment in rural areas.

Table 1. Comparative yield levels in the region for selected products (FAO-STAT, 2010)

Average yield (TM/Ha)	Haiti	Belize	Honduras	Jamaica	Dom. Rep.
Banana (plantain)	5.02	21.18	10.36	18.83	11.99
Green coffee	0.28	1.40	0.85	1.01	0.27
Corn	0.76	3.46	1.08	1.17	1.40
Cassava	4.07	11.00	6.35	18.53	7.51

- 1.2 The decline of Haitian agricultural productivity and growth is partly explained by low allocation of fiscal resources during the past decade, with little impact, to key public services required to improve competitiveness in the agricultural sector. In fact, a 2005 [Bank study](#) concluded that the reduction in public investment in agricultural services from 10% of total public expenditure in the 1990s to 2.7% in 2003-2004 substantially contributed to the sector's decline. In the past years, public allocation of resources to agriculture has improved, with 5.5% of total public expenditure being allocated to agriculture for FY 2012-2013 (without considering the post-hurricanes special allocations), but priority in the allocation of these scarce resources has not been given to finance public goods needed to improve farm competitiveness; such as agricultural health, research and innovation, or rural infrastructure, in spite of their higher economic return rates compared to the financing of private goods.² In particular, only 5% of the FY 2012-2013 investment budget for agriculture was allocated to agricultural health services (compared to the 18% allocated to subsidize fertilizer imports).³ A 2013 [World Bank study](#) concludes that the weakness of Haitian agricultural health and food safety services, that entails the non-compliance with sanitary and

¹ References for this section: General Agricultural Census 2008-2009 (www.agriculture.gouv.ht); www.brh.net; www.mefhaiti.gouv.ht.

² See Agriculture and Natural Resources Management Sector Framework Document (GN-2709)

³ www.mefhaiti.gouv.ht

phytosanitary norms, is an important factor hampering agricultural productivity and agricultural exports.

- 1.3 **Vulnerability to agricultural pests and diseases.** Agricultural health is a global public good that is crucial to enhance international trade and farm productivity, with basic rules for food safety and animal and plant health standards set out by the Agreement on the Application of Sanitary and Phytosanitary Measures, an international treaty of the World Trade Organization that constrains agricultural health and food safety public policies. In Haiti, plant and animal pests and diseases generate high production losses and reduced trade opportunities among farmers.⁴ In 2013, the Classical Swine Fever and Teschen diseases resulted in losses in the pig supply chain exceeding US\$1 million annually. Likewise, the mortality rate associated with the Newcastle reaches 20 and 30% of the poultry stock (up to 80% in the case of the Creole Chicken), with annual losses estimated to be superior to US\$1.5 million. In the crop subsector, the average US\$10 million of annual exports of Haitian mangoes to the USA may double if sanitary norms could be met ([World Bank study](#)), being now at permanent risk of accessing that market due to the presence of Fruit Flies in containers. In 2007, suspension of market access of mangoes due to Fruit Fly resulted in losses amounting to US\$4 million. A pest such as the “Crazy Ant” (*Paratrechina longicornis*), causes total losses of US\$11 million per year in the infested areas. The coffee borer infestation affected approximately 20% of coffee plantations in 2013, but it can destroy up to 50% of the crop and thus exclude Haitian coffee from “gourmet” international markets.
- 1.4 **Challenges.** Because of its importance for agricultural competitiveness in Haiti, several donors and technical agencies, including the Bank,⁵ have been supporting Government investment efforts in agricultural health during the last 20 years. Some important achievements include: the training of more than 1,000 field veterinary agents; the creation of 550 “Animal Health Groups;”⁶ the annual vaccination of up to 2 million animals against the Classical Swine Fever, Anthrax and Newcastle diseases; the implementation of a Fruit Fly monitoring system and of some control measures against the Coffee Borer; and the construction of eight quarantine stations and of the Tamarinier National Veterinary and Food Quality Control Laboratory (LVCQAT, for its French acronym).
- 1.5 Resources allocated to improve agricultural health services had little impact on the quality of its performance. Using their internationally recognized evaluation tools, in 2010-2011, the World [Organization for Animal Health](#) (OIE, for its French acronym) and the [Inter-American Institute for Cooperation on Agriculture](#)

⁴ References for this section: Animal Health Directorate and Cuban veterinary mission, 2014; www.brh.net; Plant Health Directorate and IDB, 2014; Kore Kafe project, 2014; Jose Brax, *Etude sur le secteur avicole haïtien*, 2010.

⁵ The Bank has supported the following Government program on agricultural health in Haiti: 738/SF-HA, Swine Repopulation (1983–2002); 2393/GR-HA, Rural Supply Chains Development Program (2006–2014); ATN/CF-12043-HA, Co-Financing of operation 2393/GR-HA (2009-2013).

⁶ Field associations that play a key role in the epidemiological surveillance and vaccination system

- (IICA) assessed the performance of the veterinary and phytosanitary services delivered by the Animal Health, Plant Health and Quarantine Directorates of the Ministry of Agriculture, Natural Resources and Rural Development (MARNDR), by analyzing, respectively, 46 and 28 criteria grouped into four “critical competencies” components: (i) human, physical and financial resources; (ii) technical authority and competency; (iii) interaction with stakeholders; and (iv) access to markets. According to both methodologies, the “performance scores” attributed to the Haitian veterinary and phytosanitary services were 1.58/5 and 12.5% respectively, the lowest scores in the region.
- 1.6 According to these assessments, factors impeding the improvement of services in spite of Donor’s support during decades, include: (i) an obsolete institutional, legal and regulatory framework, unable to support the development of a technically-sound agricultural health system; (ii) the absence of a strategic vision based on international standards and best practices, resulting in the inadequate allocation of resources, with priority given to finance routine activities, instead of investing in the modernization or creation of critical services; (iii) the centralization of services in the capital city, and the associated lack of provision of permanent proximity services to farmers (to date: 0 agricultural health centers on the field); (iv) absent or obsolete procedures to ensure the proper operation of agricultural health services; (v) the lack of evidence-based decision-making system, in the absence of monitoring, evaluation and information system; (vi) the lack of continuity after the end of projects financed by Donors, due to insufficient public funding and the absence of sustainable and independent financial mechanisms (current cost recovery rate in Haiti is 0%, while in most countries of the Region, the proportion of governmental funds and self-sustained funds from fees is around 50%)⁷ to cover recurrent costs; (vii) total absence of essential services such as plant epidemiosurveillance (except for the Fruit Fly), plant health diagnostic capacities (no laboratory) or risk analysis; (viii) weakness of other critical services such as animal epidemiosurveillance (absence of rigorous surveys) or veterinary diagnostic capacities (to date: only 6 of the 36 analysis mandatory to obtain the accreditation can be conducted by the National Laboratory); (ix) private-sector related activities operated by the Public Sector, due to weak private sector capacities and the absence of delegation and regulation mechanisms; and (x) lack of permanent public staff to operate and maintain infrastructures and equipment, once the latter are built/installed (to date, only 25% of essential positions are filled).
- 1.7 Taking into account international best practices and the OIE and IICA recommendations to improve the performance of services (see Table 2), the Government of Haiti (GoH) in 2012 initiated an institutional and legal reform to modernize the agricultural health and food safety public services. With support from the Bank’s “Institutional Strengthening and Reform of the Agricultural Sector” Programmatic Policy Based Grants - PBG (2731/GR-HA and 2945/GR-HA), GoH prepared a draft law to create an Agricultural Health and

⁷ Plant, Animal and Food Safety Risk Management Report for Belize, Jaime Estupiñan/IDB, 2009.

Food Safety public autonomous body, an optimal institutional scheme for the provision of services, and regulatory norms on animal and plant health, all of which are expected to become effective in 2015. In the meantime, GoH created an Agricultural Health Unit (UPS, for its French acronym) within the MARNDR that consolidates into one single unit the Animal Health, Plant Health, Quarantine and Tamarinier Laboratory Directorates, in order to ease the coordination of their services. The UPS is a transitory, but sufficient, institutional scheme to continue regular provision of services until the Autonomous Body is created by law. GoH also prepared a Strategic and Investment Plan for the Modernization of the Agricultural Health and Food Safety Services for 2014-2019 (“SPS Plan”). This Plan establishes the main lines of action for improving the quality of the services for 2014-2019, in accordance with the recommendations from the OIE and IICA assessments. The SPS Plan has begun implementation with support from the Bank. Remaining resources of the Agricultural Health component under operation 2393/GR-HA have been used to install 26 solar energy cold chain units (125 additional units will be installed across the country before the end of 2014), launch a pilot cattle traceability program (to be expanded to 1,000,000 animals before the end of 2014), and construct or rehabilitate three quarantine posts.

Table 2. Critical competencies, OIE or IICA scores, and recommendations

Critical competencies (summary per component)	Score*	Main recommendations addressed by the Bank
Human, physical and financial resources	AH: 1,78/5 PH: 20%	Update the national legal framework in accordance to the international legal framework (addressed by Policy-Based Grants - PBGs) Re-structure the animal and plant health services (PBG) Decentralized services on the field, with adequate material and human resources Prepare a strategic and investment plan for the agricultural health services (PBG) Prepare and implement a human resources plan and clear operating procedures Ensure continuing training programs for public and private field agents Install a national cold chain (done with 2393/GR-HA) Increase material resources and improve their management and maintenance Develop more sustainable and independent financial mechanisms
Technical authority and competency	AH: 1,35/5 PH: 14%	Strengthen the quarantine services (partially done by 2393/GR-HA) Develop the epidemiologic vigilance system (include: list of pests and diseases; field network of voluntary agents, epidemiological surveys, public communication) Improve diagnostic capacities (infrastructures, equipment, procedures, staff) Develop risk analysis capacities Develop an agricultural health information system Strengthen priority control programs and implement cost-recovery mechanisms Improve coordination with other public entities (i.e. Ministry of Public Health) Improve the management and access to information Establish a cattle traceability system (done with 2393/GR-HA)
Interaction with stakeholders	AH: 2,33/5 PH: 17%	Develop and implement a communication and training plan for farmers and breeders, including the voluntary members of the field network (partially done by 2393/GR-HA) Establish an official system of registering and accreditation for delegation to private professionals Establish a Veterinary Council to regulate the veterinary private professionals
Access to markets	AH: 1,37/5 PH: 8%	Update the legal framework (PBG)

*OIE score for Animal Health (AH): 1 (lowest) to 5 (highest); IICA score for Plant Health (PH): from 0 to 100%.

- 1.8 Despite recent progress, Haiti still needs to improve significantly its agricultural health services. Besides finalizing the policy, legal and institutional reform of these services, Haiti faces the challenge of continuing the implementation of the SPS Plan in order to improve their quality and performances as a means to improve agricultural competitiveness.
- 1.9 **Lessons learned.** This Program takes into account important lessons learned from Bank and other donor-financed operations in Haiti, as well as evidence from research undertaken in Haiti and abroad. Main lessons are included in Table 3.

Table 3. Lessons Learned

Lessons learned ⁸	Reflected in the Program design
The promotion of collective action schemes among farmers is key to their participation in actions for agricultural health, with a view to prevent a small minority from thwarting the realization of its benefits. It is fundamental for producers and their organizations to join health campaigns and participate in the decision process.	The project will finance activities aiming at the structuring, training and awareness raising of farmers to ensure their active participation, especially in epidemiological surveillance and pests and diseases control campaigns (§1.17 and 1.18)
A policy of sharing costs with beneficiaries is important for sustainability. Health actions require an extended time horizon to be effective; therefore, contribution from beneficiaries helps to mitigate natural fluctuations in public financing.	The project will finance the design and implementation of cost recovery mechanisms (§1.16)
A legal framework is needed for agricultural health with clear competency to regulate and implement corrective measures that are harmonized with international standards. Framework legislation and specific regulations on quarantine and health oversight help to make campaigns flexible and effective, offering certainty and clarity for the private sector.	The modernization of the legal framework is being supported by series of programmatic PBGs and will culminate with the approval of the new bills, creating an Agricultural Health and Food Safety Public Autonomous Body and establishing the new regulatory standards on agricultural health and food safety. In the meanwhile, though, until the reform is completed, the basic institutional organization and regulations required for the execution of operation HA-L1094 are currently in place.
Technical autonomy of the executive agency is crucial due to the nature of the threats dealt with by health services. The local and international credibility of the agency demands that its decisions be taken solely on scientific basis, with no other interference.	

- 1.10 **Conceptual overview.** The proposed operation is consistent with the long-term action plan supported by the Bank since December 2011 to increase agricultural growth and sustainability through: (i) strengthening dialogue on agricultural policies particularly to improve quality of agriculture public expenditure; (ii) investing in rural flood protection and agricultural intensification infrastructure to enhance farm productivity; (iii) promoting sustainable agricultural practices, especially agro-forestry and tree-cropping based practices and adaptation to climate change through technology transfers; (iv) the modernization of agricultural services, which include agricultural health services; and (v) facilitating rural land tenure regularization. This action plan is already under implementation by GoH with Bank assistance.⁹

⁸ Sector Framework Document on Agriculture and Natural Resources Management (GN-2709-2)

⁹ The following active Bank investment operations support the agriculture sector in Haiti: Rural Supply Chain Development Program (2393/GR-HA); Agricultural Intensification Program in Ennery-Quinte (2390/GR-HA); Natural Disaster Mitigation Program in Priority Watersheds (2187/GR-HA);

- 1.11 The program was designed considering the following aspects: (i) it will contribute to better performance of services through their effective integration and coordination both within the MARNDR and with other public entities, especially the Ministry of Public Health (MSPP, for its French acronym) and Ministry of Trade and Industry (MCI, for its French acronym)¹⁰ concerned by agricultural health and food safety; (ii) it will promote institutional sustainability and better proximity services to farmers, through the GoH's commitment to improve the staffing in essential personnel on the field; (iii) it will promote financial sustainability, with permanent operating expenditures financed by public resources and fees, through cost recovery mechanisms; and (iv) it will foster better interaction with producers and private sector professionals, through the preparation and execution of pests and diseases control programs jointly with the productive sector concerned, and activities that will involve participants throughout the supply chain and the public in general.
- 1.12 The operation takes into account the outcomes of studies evaluating the impact of similar Bank operations in other countries. Those studies offer empirical evidence of the effectiveness of interventions that aim at improving agricultural health services.¹¹ Due to the lack of similar empirical evidence in Haiti, the proposed program will include an impact evaluation plan with a rigorous methodology to measure its results (¶3.13). The design and installation of an integrated information system for agricultural health, to be financed by the program, will also allow providing essential data that is not available to date. The particular design of the plant and animal pests and diseases control programs followed recommendations from the United States Department of Agriculture (USDA) and OIE, that are based on experiences in the region but also consider the specificities of the Haitian agricultural sector, such as numerous very small farmers, the absence of orchards and a system of free-range pig breeding.
- 1.13 **Consistency with national priorities and donor coordination.** The operation will exclusively finance activities included in the GoH's SPS Plan. The proposed program was jointly prepared with other Donors, who will support other actions of the SPS Plan, including activities to strengthen critical quarantine and inspection services. The World Bank will provide approximately US\$5 million to support the building and equipment of decentralized agricultural health and food safety centers (in departments not covered by the proposed program), pursue the efforts to modernize the quarantine services, and finance control campaigns (for other animal and plant pests and diseases than those considered by the proposed

Technology Transfer to Small Farmers (2562/GR-HA); Land Tenure Security in Rural Areas (2720/GR-HA); Water Management in the Artibonite Basin (3089/GR-HA).

¹⁰ MSPP supervises food and beverage processing facilities and outlets; and MCI is responsible for establishing and controlling technical norms in food process industries.

¹¹ (i) GRADE (2008): Resultados globales de la evaluación de impactos de PRODESA en los programas de sarna de camélidos, control biológico y mosca de la fruta; (ii) GRADE (2008): Análisis de los impactos institucionales del PRODESA en Perú; (iii) OVE (2009): *Evaluación Ex Post de Proyectos de Sanidad Agropecuaria y Seguridad*; and (iv) Evaluation of the Plant and Animal Health Component of the Agricultural Services Modernization Program in Ecuador (loan 892/OC-EC).

operation). The IICA, the USDA and the European Union will concentrate their efforts on the modernization of the Food Safety services (for an estimated budget of US\$2 million). The accumulated resources provided by the Bank, the Public Treasury and other Donors exceed US\$23 million, an amount that represents 60% of the total budget of the SPS Plan.¹² Executing arrangements of the proposed operation are also consistent with the MARNDR's global reform plan, supported by the Bank's PBGs.

- 1.14 **Consistency with the Country Strategy, Sector Strategy and GCI-9.** The program is aligned with the Bank's Country Strategy with Haiti for 2011-2015 (GN-2646), which sets agriculture as a priority sector of intervention. This operation is included in the 2014 Operational Program Report (OPR) (GN-2756-2), currently under review. The program contributes to the four lending program priority targets outlined in the Report on the Ninth General Increase in the Resources of the Bank (AB-2764): (i) small and vulnerable countries; (ii) poverty reduction and equity enhancement, as beneficiaries will be mainly poor farmers; (iii) support climate change initiatives, renewable energy and environmental sustainability, as the operation will finance the implementation of a solid environmental risks mitigation and hazardous material management plan; and (iv) support regional cooperation and integration, as agricultural health is a global public good. The program fulfills the following criteria established in the guidelines for the classification and validation of operations eligible for the GCI-9 regional cooperation and integration lending priority (GN-2733): (i) cross-country focus: the program supports investments that will contribute to the internationalization of the private sector. In particular, it will facilitate the safety of mango "francisque" exports; and (ii) national subsidiarity: the program will support the alignment of national agricultural health standards and practices to international codes established by the OIE and IICA. The operation is consistent with the strategic priority "Protect the environment, respond to climate change and enhance food security," and will contribute to its Regional Development Goal "Annual growth rate of agricultural GDP" and its output "Farmers given access to improved agricultural services and investments." (100% Afro-descendants). The program is consistent with the Bank's Sector Framework Document on Agriculture and Natural Resources Management (GN-2709-2), particularly with its priority of "Modernization of national systems for agricultural health and food safety to promote schemes of collective action and cost-sharing among farmers, as well as regulations with a regional vision, ensuring uniformity of quality standards between domestic and external markets."

B. Objective, Components and Cost

- 1.15 The general objectives of the operation are to reduce agricultural and livestock losses as well as to increase exports of Haitian agricultural products. The specific objectives are to strengthen the GoH's capacity to provide integrated, decentralized and sustainable agricultural health services, and to improve the

¹² See: [Repartition of the financial contribution of each Donor to the SPS Plan.](#)

plant and animal health conditions in the country. The operation is structured in four components, which correspond to the four pillars of the GoH's SPS Plan.

- 1.16 **Component 1. Institutional Management (US\$5.4 million).** This component includes: (i) infrastructures and equipment to establish five administrative and technical decentralized agricultural health centers in selected departments, to provide proximity services to approximately 640,000 farmers. The departments of Ouest, Artibonite, Centre, Sud, and Nord'Ouest were selected because they are the most important in terms of number of farmers and agricultural and livestock breeding activities (with the departments of Nord and Nord'Est, where the World Bank will finance similar centers); (ii) design and implementation of modern administrative and operating procedures applicable to central and departmental agricultural health services; (iii) design and implementation of cost-recovery mechanisms in five key functions of the agricultural health services (Classical Swine Fever and Teschen Disease control program; Anthrax control and cattle traceability program; Fruit Fly monitoring and control program; quarantine services; and LVCQAT); and (iv) design and implementation of an integrated information system.
- 1.17 **Component 2. Plant Health (US\$2.8 million).** It includes physical investment, technical assistance and/or training financed by IDB funding: (i) initial preparation and subsequent annual update of the list of plant pests and diseases present in Haiti; (ii) training of 5,500 farmers, members of the voluntary plant surveillance network. 10 persons will be chosen in each of the 550 "communal sections" of Haiti, among representatives of existing farmers associations who will have expressed their interest to be part of the network; (iii) phytopathology and virology equipment, biosecurity and quality plans and laboratory protocols, as well as staff training for the Plant Health Laboratory; and (iv) training and technical assistance required for the creation of a Plant Health Risk Analysis Unit. It also includes new or modernized but routine activities that require mainly consumables and operating costs. They are either financed by Public Treasury, with no cost recovery mechanism foreseen: (v) preparation and dissemination of monthly plant health surveillance bulletins among farmers; or supported by an initial IDB funding, because of their pilot characteristic: (vi) implementation of a pilot Fruit Fly control program in the two adjacent municipalities of Gros Morne and Terre Neuve, in the Artibonite department. These municipalities were selected for (a) being the largest mango "Francisque" production area in the country (b) constantly having a high average infestation rate of Fruit Fly. The control program will benefit all the 15,000 mango producers in the pilot area. If the impact evaluation confirms the relevancy of pursuing the activity after the pilot phase, a cost recovery mechanism will be designed to finance at least the consumables for subsequent campaigns; (vii) implementation of a pilot "Crazy Ant" control program in the Grand'Anse department, the most affected by crazy ant in the country, where the national infestation started from, and more specifically in the two adjacent municipalities of Abricot and Moron, that were selected for representing the highest agricultural production in the department and easy accessibility, in order to minimize the operating costs and the length of time

needed to install traps and distribute baits. The control program will benefit all the 12,000 farmers in the pilot area.

- 1.18 **Component 3. Animal Health (US\$3.1 million).** It comprises technical assistance and/or training, financed by IDB funding: (i) training of 5,500 breeders, members of the voluntary animal surveillance network. 10 persons will be chosen in each of the 550 communal sections of Haiti, among representatives of existing breeders associations who will have expressed their interest to be part of the network; (ii) training and technical assistance required for the creation of an Animal Health Risk Analysis Unit; (iii) training of 1,250 veterinary private paraprofessionals, selected among interested people residing in the communal sections where the lack of veterinary services is the most critical, and who will meet criteria such as literacy and numeracy skills and physical fitness; (iv) design and implementation of a registering, accreditation and regulation system of the veterinary private professionals. It also includes new or modernized but routine activities that require mainly consumables and operating costs. They are either financed by Public Treasury, with no cost recovery mechanism foreseen: (v) collection of animal blood and tissue samples for analysis; (vi) Classical Swine Fever (CSF) and Teschen disease epidemiological surveys; (vii) preparation and dissemination of monthly animal health surveillance bulletins among breeders; (viii) implementation of a maintenance service for the national solar energy cold chain system currently under installation (¶1.7); or supported by an initial IDB funding, waiting for cost recovery mechanism to be effective: and (ix) one CSF and Teschen disease vaccination campaign, combined with a pig identification (tag) campaign, benefiting 611,000 breeders (this number corresponds to all pig breeders in Haiti, as the Classical Swine Fever and Teschen disease control program will be a national campaign). The proceeds of this first campaign, obtained through the cost recovery mechanism, should finance at least the consumables needed for subsequent campaigns.

- 1.19 **Component 4. Tamarinier National Veterinary and Food Quality Control Laboratory (LVCQAT) (US\$2.6 million).** The laboratory's main role is to analyze the samples provided by the animal epidemiovigilance activities. This component will finance all investments required to allow the accreditation of LVCQAT, including (i) infrastructure upgrading; (ii) equipment; (iii) preparation of procedures and protocols on topics such as biosecurity and quality assurance; and (iv) staff training, including training on operation and maintenance of equipment, that will be under the responsibility of the LVCQAT's staff.

C. Key Results Indicators

- 1.20 The project is expected to reduce agricultural and livestock losses as well as to increase exports of Haitian agricultural products. It will support the integration and decentralization of agricultural health services; improve financial sustainability of services through effective cost recovery mechanisms; improve the performance of plant and animal health services and of plant and animal health conditions in the country; and improve the performance of LVCQAT

services. Table 4 summarizes key indicators, measurement periods and selection rationale.

Table 4. Key indicators, measurement periods and selection rationale

Key Indicators	Period	Selection rationale - The indicators measure:
Impact		
Quantity of mango “Francisque” exports	Y5	The increase of Haitian agricultural exports
% of agricultural crops lost by crazy ants’ infestation	Y5	The effect of a lower infestation of crazy ant
% of agricultural crops lost by fruit-fly infestation	Y5	The effect of a lower infestation of Fruit Fly
Annual loss of pigs caused by the CSF	Y5	The effect of a lower prevalence of CSF
Annual loss of pigs caused by Teschen disease	Y5	The effect of a lower prevalence of Teschen disease
Outcome (selected indicators)		
Component 1: Number of farmers who will benefit from provision of decentralized services	Y5	Improvement in the proximity agricultural health services
Component 2: Score PVS/IICA	Y5	Improvement in the performance of plant health services
Component 3: Score PVS/OIE	Y5	Improvement in the performance of animal health services
Component 4: “P2” Accreditation obtained	Y5	Improvement in the performance of the LVCQAT

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing Instruments

- 2.1 The total project amount is US\$16,000,000 financed by the IDB Grant Facility up to the amount of US\$14,000,000, and by the national counterpart up to the amount of US\$2,000,000. The disbursement period will be 60 months. Table 5 provides the cost summary by investment categories and components (see also the [detailed budget per output](#)). The budget includes all costs associated with risks mitigation measures mentioned in ¶2.3, 2.4, 2.5 and 2.6.

Table 5. Estimated cost by component in US\$ million

Investment categories	IDB	Local	Total
I. Components			
1. Institutional Management	4.4	1.0	5.4
2. Plant Health	2.6	0.2	2.8
3. Animal Health	2.5	0.6	3.1
4. Tamarinier National Veterinary and Food Quality Control Laboratory	2.5	0.1	2.6
II. Monitoring-Evaluation, Audit, Administration, Contingencies			
Monitoring, Evaluation, Audits	0.8	0	0.8
Administration and Supervision	1.0	0.1	1.1
Contingencies	0.2	0.0	0.2
Total	14.0	2.0	16.0

B. Economic Analysis

- 2.2 A cost-benefit analysis was conducted in order to assess the economic viability of the proposed program. As the incremental benefits of Component 1 and Component 4 are considered complimentary to those of Component 2 and Component 3, the quantitative part of the analysis is focused only on the latter components. These benefits are those generated by the campaigns against pests and diseases such as the Fruit Fly, Crazy Ant, the CSF and the Teschen disease,

i.e.: (i) the increased productivity due to the reduction of agricultural losses; and (ii) the reduction in the rejection rate of exportable products. The annual overall costs of the program considered in the analysis include both investment costs and recurrent costs. The analysis envisions a project horizon of 15 years and uses a 12% discount rate. Goods and services considered in the analysis are evaluated using their economic prices. The project is considered economically viable as its estimated Internal Rate of Return is 20.7%, a rate that largely exceeds the 12% discount rate. The positive Net Present Value associated with the project amounts to US\$3.3 million. Despite the fact that the economic analysis of the project is based on reasonably conservative assumptions, a broad sensitivity analysis was conducted in order to increase the reliability of the results, the robustness of which is confirmed. The sensitivity analysis determined that even in the occurrence of an unexpected cost increase of up to 13%, the project would still maintain its economic viability.

C. Environmental and Social Safeguard Risks

- 2.3 Following the guidelines in the Bank's Environment and Safeguards Compliance Policy (OP-703) and the Indigenous People Policy (OP-765), this operation has been classified as Category "B." Positive social and environmental impacts are expected from the program. In terms of social impacts, the expected increase in farmers' income level as a result of the program's activities will contribute to improve social condition in rural areas. A positive environmental impact is expected from improved practices in term of handling, collection and disposal of pesticides (Component 2), used syringes, biological wastes, and laboratory reagents, and improved hygiene and safety practices in laboratories (Component 3 and Component 4). This will result in less environmental pollution and less exposure to hazardous materials for workers in particular and the population in general. No resettlement and no adverse impacts on critical habitats or endangered species are foreseen. The potentially adverse environmental impacts will be occasional and of limited scope, as all activities with potential negative impact (use of pesticides, syringes and laboratory reagents, and generation of biological wastes and wash water) will be accompanied by readily and proven mitigation measures, whose costs have been incorporated into the operation's budget. The only limited impacts will be related to the construction of infrastructure, which associated mitigation measures will be incorporated in the bidding documents for the works. An environmental and social analysis was conducted and the associated Environmental and Social Management Plan (ESMP) will be included in the Operation Manual. The evidence, satisfactory to the Bank, that mitigation measures included in the ESMP have been implemented will be a condition prior to the execution of animal epidemiovigilance and diseases control activities (Component 3). This information is incorporated in the [Environmental and Social Management Report](#).

D. Fiduciary Risk

- 2.4 The financial risk of the proposed program is evaluated as being high, given UPS' (see ¶1.7) lack of management experience of Bank-financed operations and of an accounting system for the management and reporting of financial transactions. Key mitigation measures include: (i) the installation of an accounting system, including the training of users; (ii) the staffing of the UPS administrative and financial department (¶3.2); and (iii) the preparation of a detailed Operation Manual (¶3.9). The ex-ante review method will apply for disbursements. During the first year of the project, the Bank will conduct financial inspection visits on a quarterly basis, to review the execution of financial plan, the preparation of financial reports, and project expenses and documentation. All costs associated with mitigation measures are included in the operation budget.
- 2.5 The procurement risk is evaluated as being medium-high. The recently created MARNDR's Procurement Unit (UPMP, for its French acronym), responsible of its procurement activities since 2013, has become operational with experienced staff assigned and procedures officially approved. As mitigation measure, additional human resources will be hired to support the UPMP during periodic workload peaks. During the project's life, the Bank will conduct at least one procurement inspection visit per year. The ex-ante review method will apply for procurement but can evolve towards ex-post based on findings of the supervision missions. All associated costs are included in the operation budget.

E. Other Key Issues and Risks

- 2.6 The main risk identified during a workshop conducted with GoH is associated with human and financial resources (lack of staff, in quantity and qualification; poor human resources management; and insufficient budget allocation) that are currently too weak to sustain an adequate agricultural health system in the country, in particular to properly operate and maintain the infrastructures and equipment to be financed by the program. Mitigation measures include: (i) the staffing of essential staff by GoH (¶3.5) prior to project's investments; (ii) sustained technical assistance and staff training (¶1.16 to ¶1.19); (iii) support to implement modern human resources management practices (¶3.2); (iv) the guarantee of an operating budget through national counterpart (¶2.1 and [optional electronic link #2](#)); and (v) the design and implementation of rigorous maintenance plan, and associated training in maintenance (¶1.18, ¶1.19, ¶3.9). Besides these measures, the Bank will finance the design and be closely monitoring the implementation of the cost-recovery mechanisms (¶1.16 and ¶3.6), an important part to improve sustainability of services in the long-run. The general risk qualification of the program is high.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary Implementation Arrangements

- 3.1 The beneficiary of the program will be the Republic of Haiti and the Executing Agency (EA) will be the Ministry of Agriculture, Natural Resources and Rural Development (MARNDR). The EA will be responsible for the overall administration of the program, including: planning and reporting for technical and fiduciary aspects; execution of procurement activities; the supervision of technical assistance firms; financial and accounting management, including the submission of disbursement requests; risks management; monitoring and evaluation; and complying with contractual conditions of grant agreement.
- 3.2 The MARNDR will execute the aforementioned tasks through its Agricultural Health Unit (UPS). The UPS, headed by a Coordinator, was recently created within the Ministry. **The approval of the UPS human resources plan, which includes the UPS functional regulations, organizational chart and staffing of technical, administrative and financial departments, will be a special contractual condition prior to first disbursement. To support the UPS Coordinator in its tasks, the hiring or assignment of a planning, monitoring and evaluation specialist, of a human resources specialist, and of an administrative and financial manager, all financed by the proposed operation, will be special contractual conditions prior to first disbursement.**
- 3.3 A Steering Committee will be created to ensure strategic general guidance as well as the approval of the Operation manual, initial Multi-Year Execution Plan, Annual Operation Plans and semiannual Progress Reports. This committee will be led by the Minister of the MARNDR, and composed of: (i) the MARNDR's General Director; (ii) a representative of the MSPP, MCI, and Ministry of Economy and Finances; and (iii) one or two representatives of each of the following associations: farmers, breeders and veterinary private professionals, representing different departments of the country. Representatives of the Bank and other Donors will be invited as observers. The Steering Committee will meet at least three times per year. **The creation of the Steering Committee will be a special contractual condition prior to first disbursement.**
- 3.4 To enhance interministerial coordination among MARNDR, MCI and MSPP on Agricultural Health and Food Safety, **the signature of a Ministerial Order from the Prime Minister, to make official the establishment of the Food and Zoonoses Control Interministerial Committee (CICDAZ, for its French acronym) under the Prime Minister's Office,¹³ will be a special contractual condition prior to first disbursement.**

¹³ The CICDAZ was created in 2009 to bring together public agencies responsible for food health and safety, but is not an official body according to Haitian laws.

- 3.5 To ensure the usefulness of investments financed by the proposed operation, the following special conditions prior to execution will be required: (i) the assignment of essential staff (see [optional link #6](#)) required to provide basic agricultural services on the field will be a condition prior the signature of contracts for works for each of the five departmental centers (Component 1); (ii) the assignment of a manager, in charge of operations and resources management at the LVCQAT, will be a condition prior the execution of Component 4.
- 3.6 To ensure financial sustainability of the proposed operation, the signature of the contract with the firm that will design the cost recovery mechanisms will be a condition prior to the execution of any activity associated with Fruit Fly (Component 2) and CSF and Teschen disease (Component 3) control programs.
- 3.7 **Procurement activities** will be conducted as detailed in Annex III. The MARNDR's Procurement Unit (UPMP) will manage all procurement processes for goods and services. The procurement and supervision of works will be managed by the Ministry of Finances' Execution Technical Unit (UTE), a unit highly specialized in the execution of infrastructure works. The Executing Agency will use the Program's resources to cover the associated publication and supervision costs. All payments for contracts supervised by the UTE will be directly paid by the Bank. All procurement activities will be performed in accordance with Bank rules and procedures, with no exceptions to the application of the Policies for the Procurement of Goods and Works (GN-2349-9) and Policies for the Selection and Recruitment of Consulting Services (GN-2350-9). In accordance to sections 3.6 (b) and (c) of GN-2349-9, respectively, two direct contracts, totaling US\$0.63M, are envisioned. Direct contracting to purchase vaccines against the CSF is justified by the need to maintain the same virus strain, as these vaccines have been procured by the MARNDR from the same laboratory for several years. In the case of the Teschen disease vaccines, only one laboratory has currently been identified worldwide. The program will also be subject to the special provisions for procurement activities in Haiti (GN-2654).
- 3.8 **Project financial management** will be conducted as detailed in Annex III. Advance of funds methodology will be used for the disbursement of project funds and for an amount equivalent to three-month funding needs.
- 3.9 **Operation Manual.** An Operation Manual (OM) will set out the procedures to be followed by the EA with regard to planning and reporting of activities, financial management, audits, procurement and contracting, risks management, and monitoring and evaluation. The OM will include (i) financial and accounting procedures; (ii) chart of accounts; (iii) procurement procedures; (iv) inventory, equipment and consumable stocks management, fuel consumption control, and maintenance procedures; (v) Human resources management procedures; (vi) environmental and social management plan and procedures; and (vii) monitoring and evaluation plan. **The Steering Committee's approval of the OM will be a special contractual condition prior to first disbursement.**

- 3.10 **Special disbursement.** To enable the EA to fulfill all the conditions prior to first disbursement and implement critical environmental mitigation measures, an initial disbursement of up to US\$500,000 will be made to the extent the Beneficiary fulfills, to the Bank's satisfaction, all the standard general conditions prior to disbursement set forth in grant agreement, except for: (i) the submission of the initial execution report; and (ii) evidence of reliable financial information systems and internal control mechanisms (see [Annex III](#)).

B. Summary of Arrangements for Monitoring Results

- 3.11 **Planning and Monitoring.** During the grant disbursement period, the EA will submit Annual Operation Plans (AOP) no later than 30 days before the end of the preceding calendar year; and semiannual Progress Reports (PR) no later than 30 days after the end of the calendar semester. AOP and PR will be prepared following a template consistent with the Bank's "Project Monitoring Report." The AOP will include targets indicators, a work plan for the calendar year, updated procurement and risk mitigation plans, a disbursement forecast, and a maintenance plan for infrastructures and equipment. The PR will indicate the level of fulfillment of the output and outcome indicators planned in the AOP; detail the execution of procurement, risk mitigation and maintenance activities; analyze problems encountered; and propose corrective measures. Within 60 days after the last disbursement date, the EA will prepare a final report, summarizing all the PR prepared during the project life and will organize a closing workshop to present and discuss the Project Completion Report prepared by the Bank.
- 3.12 **Evaluation.** The EA will submit to the Bank: (i) a midterm, independent evaluation report no later than 36 months after the date of entry into force of the grant agreement; and (ii) a final independent evaluation report, within 90 days after the date on which 90% of the grant proceeds have been disbursed or after the Bank's official request. It will be mandatory that the final evaluation report include the results of the program's impact evaluation (see below).
- 3.13 **Impact Evaluation.** An [impact evaluation plan](#) was agreed upon with the GoH. This document presents the methodology, data collection plan, indicators to be measured, sample design and budget allocated to each activity. The evaluation methodology to be applied is a quasi-experimental approach of Regression Discontinuity combined with Propensity Score Matching for the Fruit Fly and Crazy Ant pilot control programs. To accomplish this, a data collection strategy will be implemented to administer surveys to approximately 2,700 farmers in treatment and control groups. For CSF and Teschen disease control programs, a reflexive method, supported by randomized epidemiological surveys, will be used to compare indicators before and after the intervention. The total cost of the impact evaluation amounts to US\$540,000.

Development Effectiveness Matrix				
Summary				
I. Strategic Alignment				
1. IDB Strategic Development Objectives		Aligned		
Lending Program	i) Lending to small and vulnerable countries, ii) Lending for poverty reduction and equity enhancement, (iii) Lending to support climate change initiatives, renewable energy and environmental sustainability, and (iv) Lending to support regional cooperation and integration.			
Regional Development Goals	Annual growth rate of agricultural GDP (%).			
Bank Output Contribution (as defined in Results Framework of IDB-9)	Farmers given access to improved agricultural services and investments.			
2. Country Strategy Development Objectives		Aligned		
Country Strategy Results Matrix	GN-2646	Increase agricultural income in target areas.		
Country Program Results Matrix	GN-2756-2 *	The intervention is included in the 2014 Operational Program.		
Relevance of this project to country development challenges (If not aligned to country strategy or country program)				
II. Development Outcomes - Evaluability		Highly Evaluable	Weight	Maximum Score
		9.7		10
3. Evidence-based Assessment & Solution		9.6	33.33%	10
3.1 Program Diagnosis		3.0		
3.2 Proposed Interventions or Solutions		3.6		
3.3 Results Matrix Quality		3.0		
4. Ex ante Economic Analysis		10.0	33.33%	10
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis		4.0		
4.2 Identified and Quantified Benefits		1.5		
4.3 Identified and Quantified Costs		1.5		
4.4 Reasonable Assumptions		1.5		
4.5 Sensitivity Analysis		1.5		
5. Monitoring and Evaluation		9.6	33.33%	10
5.1 Monitoring Mechanisms		2.5		
5.2 Evaluation Plan		7.1		
III. Risks & Mitigation Monitoring Matrix				
Overall risks rate = magnitude of risks*likelihood		High		
Identified risks have been rated for magnitude and likelihood		Yes		
Mitigation measures have been identified for major risks		Yes		
Mitigation measures have indicators for tracking their implementation		Yes		
Environmental & social risk classification		B		
IV. IDB's Role - Additionality				
The project relies on the use of country systems				
Fiduciary (VPC/PDP Criteria)				
Non-Fiduciary	Yes	Strategic Planning National System: Use of some sectorial or sub-national system.		
The IDB's involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:				
Gender Equality				
Labor				
Environment	Yes	The operation will finance investments for the effective disposal of hazardous materials and waste.		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	The Bank financed, through operation HA-L1003, the preparation of the Government's "Agricultural Health and Food Safety Strategic and Investment Plan 2014-2019". Additionally, the Bank supports policy, institutional and legal reforms in the sector of agricultural health and food safety through a series of programmatic PBGs (HA-L1074, HA-L1082, HA-L1093).		
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan	Yes	The Impact Evaluation will evaluate the impact of the fruit fly and crazy ants pilots providing rigorous evidence of the effects on agricultural productivity and losses obtained from investing on these types of agricultural public services.		

* 2014 Operational Program Report Update under revision.

The general objectives of the program are to reduce agricultural and livestock losses as well as to increase exports of Haitian agricultural products. The specific objectives are to strengthen the GoH's capacity to provide integrated, decentralized and sustainable agricultural health services, and to improve the plant and animal health conditions in the country. The POD details the importance of agriculture to the Haitian economy and how its decline has contributed to dramatic impoverishment in rural areas. The POD argues that this decline and the persistence of productivity gaps are largely attributable to chronic underinvestment in the sector. One of the areas where investment has been particularly low is agricultural health services.

The interventions proposed to address the weakness of the agricultural health system follow from standard diagnosis in the sector (OIC and IICA), and appear to be complementary to the policy and institutional reforms pushed by the PBGs "Institutional Strengthening and Reform of the Agricultural Sector".

Project documentation contains a solid and well-structured diagnosis, and presents some evidence that validates the effectiveness of the proposed intervention. The results matrix reflects the objectives and activities of the project and has a clear vertical logic. SMART indicators at the level of impact, results and products, with their respective baseline and target values are provided and the means of collecting the information are noted.

The economic analysis is based on the avoided agricultural losses (swine and certain crops), and the reduction in the rejection of mango exports. Benefit and cost flows appear to be properly estimated, and assumptions are clearly stated and mostly justified. Sensibility analysis demonstrates the robustness of the estimates.

The monitoring plan complies with what is expected. The impact evaluation plan proposes using quasi-experimental methods to assess the effectiveness of the interventions aimed at controlling fruit fly and crazy ant, with the respective outcomes related to increased sales for mango exports and reduction in crop losses. The proposal of using fuzzy regression discontinuity seems valid, and the identification of the control groups seems appropriate. Key variables that need to be collected are identified.

The risks identified in the risk matrix seem reasonable and include compliance indicators, as well as defining responsibility and dates for monitoring.

RESULTS MATRIX

Objective: The general objectives of the program are reduce agricultural and livestock losses as well as to increase exports of Haitian agricultural products. The specific objectives are to strengthen the government's capacity to provide integrated, decentralized and sustainable agricultural health services, and to improve the plant and animal health conditions in the country.

IMPACTS	Baseline 2014	End of project target	Comments
IMPACT 1: Increase exports of Haitian agricultural products			
Indicator 1: Quantity of mango “Francisque” exports to the USA (<i>in Tons/Ha</i>)	10,600	11,639	Source and year of baseline: MARNDR(2014) and USDA (2014) Source of Target: Economic Analysis of the project. Verification means: BRH Website and Impact Evaluation.
IMPACT 2: Reduce losses of agricultural crops			
Indicator 1: Percentage of agricultural crops lost by crazy ants’ infestation (<i>in %</i>)	93,9	70,5	Source and year of baseline: Assessment of Haitian Mango Value Chain (CRS, 2010) and baseline surveys for crazy ant diagnosis (IDB/MARNDR, 2014). This will be corroborated in 2015 with baseline surveys for the Impact Evaluation. Source of Target: Economic Analysis of the project for the case of crazy ants. For fruit fly is based on same estimates used for crazy ants. Verification means: Impact Evaluation surveys.
Indicator 2: Percentage of agricultural crops lost by fruit-fly infestation (<i>in %</i>)	50	37.5	
IMPACT 3: Reduce losses of livestock production			
Indicator 4: Average annual loss of pigs caused by the classical swine fever (<i>in US\$</i>)	593,685	148,421	Source and year of baseline: Economic Analysis and MARNDR (2013). Will be revised before the vaccination campaign through an epidemiological survey (see output 3.3) in 2015. Source of Target: Economic Analysis Verification means: 2 nd epidemiological survey, after the vaccination campaign.
Indicator 5: Average annual loss of pigs caused by the Teschen disease (<i>in US\$</i>)	449,421	112,355	

COMPONENT I: INSTITUTIONAL MANAGEMENT								
OUTCOMES	Base line	Y1	Y2	Y3	Y4	Y5	End of Project	Comments
OUTCOME 1 : Agricultural health services decentralized to the field								
Indicator 1.1: Number of farmers who will benefit from provision of decentralized plant and animal health services (<i>in: # of farmers</i>)	0					640,000	640,000	Source and year of baseline: 2009, General Agricultural Census (for the number of farmers) Verification means: independent final evaluation. Observation: the target corresponds to the number of farmers in the 5 departments (Ouest, Artibonite, Centre, Sud, Nord'Ouest) were a decentralized agricultural health center will be operating.
OUTCOME 2: Cost recovery system established for key functions/programs	0							Targets for indicators 2.1 to 2.5 are based on the average cost recovery rate observed in other countries of the region, but they may be revised in Y2 following the recommendations of the firm that will design the cost recovery system. Fees should cover most consumables and activities performed by private sector agents; remaining costs will be covered by Public Treasury (i.e. salaries of MARNDR's staff, fuel...)
Indicator 2.1: Percentage of operational cost covered by fees in the Fruit Fly monitoring and control program (<i>in: % of total costs</i>)	0					50%	50%	Operation HA-L1094 will finance the Fruit Fly control program for 2 years only. Cost recovery (and Public Treasury) should finance the program for the subsequent years. Source and year of baseline: 2014 Verification means: internal reports by the financial service of the Agricultural Health Unit.
Indicator 2.2: Percentage of operational cost covered by fees in the Classical Swine Fever and Teschen disease control and pig identification program (<i>in: % of total costs</i>)	0					50%	50%	Operation HA-L1094 will finance the Classical Swine Fever and Teschen disease control and pig identification program for the 1 st year only. Cost recovery (and Public Treasury) should finance the program for the subsequent years Source and year of baseline: 2014 Verification means: internal reports by the financial service of the Agricultural Health Unit.
Indicator 2.3: Percentage of operational cost covered by fees in the Anthrax control and cattle identification program (<i>in: % of total costs</i>)	0					50%	50%	Anthrax control and cattle identification will be financed by the World Bank but operation HA-L1094 will finance the cost recovery mechanism. Source and year of baseline: 2014 Verification means: internal reports by the financial service of the Agricultural Health Unit.
Indicator 2.4: Percentage of operational costs covered by fees at LVCQAT (<i>in: % of total costs</i>)	0					50%	50%	Source and year of baseline: 2014 Verification means: internal reports by the financial service of the Agricultural Health Unit.

OUTCOMES	Base line	Y1	Y2	Y3	Y4	Y5	End of Project	Comments
Indicator 2.5: Percentage of operational costs covered by fees in the Quarantine services (<i>in: % of total costs</i>)	0					50%	50%	Quarantine services will be financed by the World Bank but operation HA-L1094 will finance the cost recovery mechanism. Source and year of baseline: 2014 Verification means: internal reports by the financial service of the Agricultural Health Unit.
COMPONENT II: PLANT HEALTH								
OUTCOMES	Baseline	Y1	Y2	Y3	Y4	Y5	End of Project	Comments
OUTCOME 3: Improved performance of plant health services								
Indicator 3.1: Score PVS/IICA (<i>in %</i>)	12.5					40	40	Source and year of baseline: IICA, 2011 Verification means: PVS/IICA evaluation The target has been calculated based on the assumption that (i) the proposed project and the series of PBGs will allow to improve several of the 28 IICA criteria (ii) each criteria benefitting from an intervention included in the project or the PBGs will improve its individual score between 10 to 100% (depending on the effect expected from the specific intervention).
Indicator 3.2: Number of farmers who benefit from improved plant health (fruit fly and crazy ant pilots) (<i>in: # of farmers</i>)	0			27,000			27,000	Source and year of baseline: General Agricultural Census, 2009 Verification means: Plant Health Directorate supervision/monitoring reports
OUTCOME 4: Improved plant health conditions								
Indicator 4.1: Maximum Fruit Fly infestation rate (<i>in flies per trap per day</i>)	7			< 2	< 2	< 2	< 2	Above 2 flies per trap per day, the infestation rate makes the exports too risky. This will be measured in the area of intervention: Gros Morne and Terre Neuve municipalities Source and year of baseline: Plant Health Directorate and USDA, 2014 Verification means: Plant Health Directorate supervision/monitoring reports + specific surveys
COMPONENT III: ANIMAL HEALTH								
OUTCOMES	Baseline	Y1	Y2	Y3	Y4	Y5	End of Project	Comments
OUTCOME 5: Improved performance of animal health services								

OUTCOMES	Base line	Y1	Y2	Y3	Y4	Y5	End of Project	Comments
Indicator 5.1: Score PVS/OIE (<i>in points/5</i>)	1.58					2,8	2,8	Source and year of baseline: OIE, 2010 Verification means: PVS/OIE evaluation The target has been calculated based on the assumption that (i) the proposed project and the series of PBG will allow to improve several of the 46 OIE criteria (ii) each criteria benefitting from an intervention included in the project or the PBGs will improve its individual score between 1 and 5 points (depending on the effect expected from the specific intervention).
Indicator 5.2: Number of farmers who will benefit from improved animal health (CSF and Teschen disease vaccination campaign)	0		611,000				611,000	Source and year of baseline: General Agricultural Census, 2009 Verification means: Animal Health Directorate, supervision/monitoring reports
OUTCOME 6: Improved animal health conditions in the country								
Indicator 6.1: Prevalence rate of the Classical Swine Fever at national level (<i>in: %</i>)	4%					1%	1%	Source and year of baseline: Cuban veterinary mission at LVCQAT (2014) and MARNDR (2013). Will be revised before the vaccination campaign through an epidemiological survey (see output 3.3) Verification means: control survey, after the vaccination campaign.
Indicator 6.2: Prevalence rate of the Teschen disease at national level (<i>in: %</i>)	8%					2%	2%	Source and year of baseline: Cuban veterinary mission at LVCQAT, (2014) and MARNDR (2013). Will be revised before the vaccination campaign through an epidemiological survey (see output 3.3) Verification means: after epidemiological survey, after the vaccination campaign.
COMPONENT IV: TAMARINIER NATIONAL VETERINARY AND FOOD CONTROL LABORATORY								
OUTCOMES	Baseli ne	Y1	Y2	Y3	Y4	Y5	End of Project	Comments
OUTCOME 7: Performance of the Tamarinier National Veterinary and Food Quality Control Laboratory (LVCQAT) improved								

OUTCOMES	Base line	Y1	Y2	Y3	Y4	Y5	End of Project	Comments
Indicator 7.1: P2 Accreditation obtained (in : Accreditation)	0					1	1	<p>P2 (ISO) accreditation (biosecurity and quality assurance) is delivered by an independent institution if:</p> <ul style="list-style-type: none"> - Infrastructures are in compliance with the norms - Equipment is in compliance with the norms (in terms of equipment type and calibration frequency) - Proficiency tests are passed (which demonstrates that procedures are in compliance with the norms and that the analyses are reliable) <p>Source and year of baseline: LVCQAT, 2014 Verification means: Accreditation certificate</p>
Indicator 7.2: Number of different veterinary analyses that the LVCQAT is capable to do (in: Number of analysis)	6					30	36	<p>The LVCQAT is currently capable to conduct analysis on CSF, Gomboro, NewCastle disease, Salmonellosis, ColiBacteriosis, and Avian Flu. The LVCQAT must be able to conduct 30 additional analysis to be able to obtain the certification.</p> <p>Source and year of baseline: Cuban veterinary mission report, 2014 Verification means: Agricultural Health Unit's Information System; Tuskegee University and Cuban veterinary mission reports.</p>
Indicator 7.3: Average time between the reception of a sample and the transmission of the results of the analysis to clients (in: Working days)	7					2	2	<p>Source and year of baseline: LVCQAT internal statistics, 2014 Verification means: Agricultural Health Unit's Information System</p>

[FULL RESULTS MATRIX WITH OUTPUTS](#)

FIDUCIARY ARRANGEMENTS

COUNTRY: Republic of Haiti
PROJECT N°: HA-L1094
NAME: Modernization of Agricultural Health and Food Safety Public Services
EXECUTING AGENCY: The Ministry of Agriculture, Natural Resources and rural Development (MARNDR).
FIDUCIARY TEAM: Marise E. Salnave and Romina Kirkagacli (FMP/CHA)

I. EXECUTIVE SUMMARY

- 1.1 The Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) will execute the project through its Agricultural Health Unit (UPS, for its French acronym). The project amount is US\$16,000,000 financed by the IDB Grant Facility up to the amount of US\$14,000,000 and the national counterpart up to the amount of US\$2,000,000. The UPS will ensure the financial management of program resources including counterpart funds. No financial resources of the program will be transferred to participating institutions and stakeholders.
- 1.2 The latest evaluation of the public financial management systems of the Republic of Haiti is contained in the PEFA assessment report conducted in 2011 and published in February 2012. Country financial management systems and external control mechanism, as evidenced by the recent diagnostic, would require further improvements prior to conform to levels consistent with their utilization for the fiduciary management of Bank's funded projects. As a result, no country systems will be used for the financial management of project. An evaluation of the National Procurement System in Haiti was undertaken in the context of the Maps validation conducted at the end of last year. However, it is not expected that the findings will drive to a change in the way business is conducted for Bank financed project execution. Therefore to mitigate these risks the Bank will continue in the foreseeable future to: (i) rely on special project execution units for the execution of all projects; and (ii) to implement special fiduciary arrangements for the implementation of its projects and to conduct close operation supervision of project execution units. External control will be performed for all Bank operations by independent audit firms acceptable to the Bank in accordance with the Bank's financial reporting and audit guide.

II. EXECUTING AGENCY'S FIDUCIARY CONTEXT

- 2.1 The Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) through its Agricultural Health Unit (UPS) will be Executing Agency and will be responsible for the overall execution of the project as well as the financial management and reporting. The UPS was recently created within the Ministry and has no experience in the management of Bank-financed operations. An administrative and financial unit will be created and staff as part of the UPS human resources plan to be approved and submitted by the MARNDR. An administrative and financial director will be hired to oversee that unit. The UPS does not have an accounting system. The installation of an accounting system including the training of users will be financed by the project.

- 2.2 The procurement of goods and services will be managed by the Procurement Unit for the MARNDR (“*Unité de Passation des Marchés Publics*” - UPMP according to its French acronym) which was created by a Ministerial Decree “M-AIDG/(C-17)09-13:1659 (bis)” of September 17, 2013. The procurement and supervision of works will be managed by the Ministry of Finances’ Execution Technical Unit (UTE), an executing unit highly specialized in the execution of infrastructure works. The Executing Agency will use the Program’s resources to cover the associated publication and supervision costs. All payments for contracts passed by the UTE will be directly paid by the Bank. With regards to the UPMP, the Unit has now been established and a dedicated office has been assigned its daily activities. A highly experienced procurement specialist involved in several IDB projects was designated to coordinate this unit which now includes all procurement specialists dedicated to all other projects. The recruitment of a Procurement Specialist and a Procurement Assistant specifically for this project may be required. However, the need for these two profiles will be assessed during the execution of the project depending on the workload of the UPMP. Alternatively, qualified consultants may be recruited on an ad hoc basis during pick time to support the workload of the unit.

III. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 3.1 Financial management of project is evaluated as being high as the UPS has no experience in the management of Bank financed operation and does not have an accounting system for the management and reporting of financial transaction. Key mitigation measures include the installation of an accounting system including the training of users, the preparation of project operation manual which will include among other sections: (i) Financial and accounting procedures; (ii) Chart of accounts; (iii) Inventory, equipment and consumable stocks management and fuel consumption control procedures. The UPS will hire an administrative and financial director to oversee that administrative and financial unit. The staffing of the administrative and financial unit, the hiring of the administrative and financial director and the approval of the project’s operation manual will be condition prior to first disbursements. In addition, during the first year of the project, Fiduciary staff will conduct inspection visits on a quarterly basis to review the execution of financial plan, the preparation of financial reports and the review of project expenses and documentation.
- 3.2 Considering that the UPMP will be dealing with several projects simultaneously, special organizational measures should be identified in order to coordinate the various activities conducted under each project. It is recommended that an organized archiving system is established for each project. On the other hand, this project foresees a certain number of similar procurement processes. To minimize the risk related to an important workload and in an effort of reducing transactional costs and achieving best value for money, it is recommended that the UPMP starts working on the establishment of Framework agreements. Considering that this method of procurement has not yet been explored in past projects funded by the IDB, the UPMP will be supported by the Bank in defining a strategy for the establishment of such contracts. It is also recommended that the technical staff is trained on procurement matters such as: preparation of Terms of Reference,

establishment of selection criteria, evaluation of technical and financial offers and contract monitoring during execution. This will help avoiding delays related to procurement processes by increasing cooperation between the project's technical staff and the procurement staff. With these mitigation measures, the general level of risk in procurement under operation HA-L1094 is evaluated as being high to medium. It is understood that the Unit has just been established and that new methods of procurement will be explored, however the experience of the UPMP's coordinator and of the other personnel involved in projects financed by the IDB as well as the quality of the procedures elaborated for the UPMP by an international consultant will mitigate this risk and possibly change the level of risk to medium following an initial run-in period.

IV. ASPECTS TO BE CONSIDERED IN THE SPECIAL CONDITIONS OF CONTRACT

Special conditions precedent to first disbursement:

- 4.1 Special Accounts: UPS will open two separate bank accounts (in dollars and in local currency) for the management of grant resources; and one sub-account in the Single Treasury Account for MARNDR's Investment, in local currency to be funded by local counterpart.
- 4.2 The preparation of an operation manual to include among other: (i) Financial and accounting procedures; (ii) Chart of accounts; (iii) Inventory, equipment and consumable stocks management and fuel consumption control procedures. Exchange rate valid at the day before the date of transaction will be used to record all expenses made in local currency.
- 4.3 The Central Bank exchange rate at the day of transaction will be used at the reference rate.
- 4.4 Procurement: This project foresees preliminary activities for the preparation of tender processes and contracts, prior to project approval in order to meet conditions for the first disbursement. The archiving system of the UPMP is already in place and should be used for all documents prepared for the above mentioned activities.
- 4.5 **Special Audit and financial reporting requirements:** (i) Audit of project: External auditors eligible to the Bank will be hired by the UPS to perform the audit of the program as follows: one annual financial audit of the program including the review of procurement and disbursement processes to be submitted within 120 days following the end of each fiscal year and a final financial audit of the program to be submitted within 120 days after the date of the last disbursement. For accounting and audit purposes, the Haitian fiscal year will be respected. (ii) During the first year of execution, the project will also submit quarterly unaudited financial reports 30 days after the end of each quarter. For the following years, the frequency for the submission of unaudited report will be based on risk evaluation updates determined during supervision missions.

- 4.6 Special disbursement. An initial disbursement for up to US\$500,000 will be made to the extent the Beneficiary fulfills to the Bank's satisfaction all the standard general conditions prior to disbursement set forth in grant agreements, except for (a) the submission of the initial execution report and (b) evidence of reliable financial information systems and internal control mechanisms. US\$250,000 will enable the Executing Agency to fulfill all the conditions prior to first disbursement and shall include: (i) the selection of a consultant responsible for elaborating the operation manual of the program; (ii) the hiring of the following consultants to support the UPS Coordinator: a planning, monitoring and evaluation specialist, of a human resources specialist, and of an administrative and financial director; (iii) the purchase of office and IT equipment; and (iv) the purchase and installation of an accounting system. Special disbursement will also include US\$250,000 which will be used to finance the purchase and installation of incinerators to comply with environmental safety requirements. Advance payment against bank guarantee or letter of credit issued by the Central Bank will be used for the purchase of the incinerators.

V. FIDUCIARY ARRANGEMENTS FOR PROCUREMENT EXECUTION

- 5.1 The procurement fiduciary arrangements establish the conditions applicable to all procurement execution activities in the project.

1. Procurement Execution

All project related procurement activities will be performed by the MARNDR Procurement Unit following Bank's Procurement Policies: Policies for the Procurement of Goods and Works financed by the Inter-American Development Bank (GN-2349-9) and Policies for the Selection and Contracting of Consultants financed by the Inter-American Development Bank (GN-2350-9) and the *Special Procurement Provisions for Haiti* (GN-2654).

- a. **Procurement of Works, Goods and Non-Consulting Services:** The contracts for Works, Goods, and Non-Consulting Services¹ generated under the project and subject to International Competitive Bidding will be executed through the use of the Standard Bidding Documents (SBDs) issued by the Bank. The processes subject to National Competitive Bidding (NCB) will be executed through the use of National Bidding Documents agreed to by the Bank. The technical specifications review during the preparation of the selection process, is the responsibility of the project sector specialist.
- b. **Selection and Contracting of Consultants:** The consulting services contracts generated under this project will be executed through the use of the Standard Request for Proposals (SRFPs) issued or agreed to by the Bank. The terms of reference review for the selection of consulting services is the responsibility of the project sector specialist.

***Selection of Individual Consultants:** The selection will be made in accordance with Bank's Procurement rules and procedures and will consist in evaluating the capacity of at least three candidates against set and agreed Terms of References.

¹ Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (GN-2349-9) paragraph 1.1: The services different to consulting services have a similar process as procurement of Goods.

c. **Direct contracting:** Direct contracts are foreseen under this operation. It is nonetheless commonly agreed that they are conditioned to validation by both the Executing Agency and the Bank's prior no-objection at the time of submitting all related support documentation. The main direct contracts are as follows:

- **Procurement of classical swine fever Vaccines:** This direct contracting is justified by the need to maintain the same virus stain as these vaccines have been procurement by the MARNDR from the same Lab for several years. A detailed technical justification will be provided prior to launching the process.
- **Procurement of Teschen disease vaccines:** For the time being, only one lab has been identified for this specific type of vaccine worldwide. Nevertheless a market research will be conducted to confirm the sole source prior to launching the process.

2. Thresholds (in thousands of US\$)

5.2 The thresholds established in the Special Procurement Provisions for Haiti (GN-2654) will be applied to the procurement activities to be conducted under this operation, as detailed in the following table:

HAITI – Thresholds in force since 1 January 2012 (In thousands of US\$)				
Works		Goods		Consulting Services
International Competitive Bidding	National Competitive bidding / Price Comparison	International Competitive Bidding	National Competitive bidding / Price Comparison	Short list of national firms only
≥1.000	<1.000	≥100	<100	<100

3. Main Procurement Activities

Activity	Procurement Method	Estimated Date	Estimated Amount 000'US\$
Goods			
Purchase of Vehicles	ICB	28-Jun-14	455,000
Purchase of Incinerators	ICB	28-Jun-14	250,000
Purchase of Elisa kits	ICB	2-Dec-15	179,500
Purchase of baits for fruit fly control	ICB	2-Mar-15	475,300
Purchase of classical swine fever vaccine	DC	21-Sep-15	315,000
Purchase of Teschen disease vaccine	DC	21-Sep-15	315,000
Purchase of laboratory equipment for the Plant Health Directorate and Tamarinier Veterinary Laboratory (2 lots)	ICB	12-Oct-15 & 22-Mar-17	210,000 & 300,000
Works			
Construction of five decentralized agricultural health and food safety centers in selected departments	PC	Sep-15 to Sep-17	360,000 For each centre

Rehabilitation and construction works for the Tamarinier Laboratory	ICB	28-Aug-14	1,400,000
Services			
Selection of a firm to conduct impact evaluation surveys	ICB	Jun-14	400,000
Firms			
Design and implementation of cost-recovery mechanisms for agricultural health services	QCS	1-Jul-14	300,000
Design and implementation of an integrated information system for agricultural health services	QCS	Jun-14	520,000
Selection of an annual audit firm	QCS	4-Mar-15	175,000

*To access the 18 month procurement plan, click [here](#)

4. Procurement Supervision

- 5.3 For all the reasons listed in ¶3.2 of the present Annex III, it is recommended that procurement activities be placed under ex-ante supervision. The level of risk will be reassessed during the regular supervision activities that will be conducted during operation's execution. Based on the findings, the Bank and the MARNDR may agree to adopt ex-post supervision for specific processes covered by this operation.

5. Records and Files

- 5.4 The Executing Agency will be required to keep files and track records of all procurement related activities financed by the Bank in their office in accordance with the Bank's Procurement Rules and Procedures and to the Project's Operational Rules in such a way that it be available for supervision visit by the fiduciary team. It is also recommended, and yet not mandatory, that the Executing Agency develops electronic filing so as to avoid losing paper files should a natural disaster such as an earthquake occur. It is important however to note that the national legislation in Haiti does not recognize electronic documents as being originals, which means that creating an electronic filing system should not be considered mandatory.

VI. FINANCIAL MANAGEMENT

A. Programming and Budget

- 6.1 Programming and budget execution and monitoring at the project level will rely on IDB's project financial management formats and procedures. UPS will prepare annually, an operation plan (AOP) which includes a procurement plan and a twelve-month detailed financial plan. The financial plans will respect the budget lines defined in the grant agreement (investment categories). During the first year of execution, program's financial plans will be reviewed on a quarterly basis.

B. Accounting and Information Systems

- 6.2 An accounting system will be installed as a condition to first disbursement. The system will be programmed to generate income and expenses reports by investment categories and source of funds and to generate financial statements required by bank.

C. Disbursements and Funds Flows

- 6.3 Advance of funds methodology will be used for the disbursement of project funds for an amount equivalent to three-month funding needs. The UPS will open separate bank accounts for the management of grant and counterpart resources. Disbursement Supervision will be ex-ante but can evolve towards ex-post based on findings of the supervision missions. As specified in ¶4.6, an initial disbursement for up to US\$500,000 will be made by IDB Grant to fulfill conditions prior to first disbursements and for the purchase and installation of incinerators. No financial resources of the program will be transferred to participating institutions and stakeholders. Local national counterpart will be used to finance operation cost including the staffing of the UPS. Exchange rate valid at the day of transaction will be used to record all expenses made in local currency. The Central Bank exchange rate will be used at the reference rate.

D. Internal Control and Audit

- 6.4 The internal auditor of MARNDR will fulfill the internal audit function. The internal control environment of the project will be strengthened with the preparation and implementation of the project operation manual referred to in ¶3.1.

E. External Control and Reporting

- 6.5 Audits will be performed in accordance with Bank's Guidelines for Financial Reports and External Audits as described in ¶4.5. Financial audit cost will be financed by IDB grant and estimated at US\$175,000. The program financial statements will correspond to the fiscal year. The audit firm will carry out audit on the basis of specific terms of reference to be agreed between the UPS and the Bank. During the first year of execution, the project will also submit quarterly unaudited financial reports 30 days after the end of each quarter. The frequency for the submission of unaudited report, for subsequent years, will be based on risk evaluation updates determined during supervision missions.

F. Financial Supervision Plan

- 6.6 During the first year of execution, Fiduciary staff will review the execution of financial plan on a quarterly basis and on a semi-annual basis for the following years. Quarterly inspection visit will be performed by financial management specialist, during the first year of execution however frequency of visit are subject to change based on findings raised during supervision missions.

G. Execution Mechanism

- 6.7 The UPS will maintain proper financial management systems and will prepare AOPs (see ¶6.1) indicating cash flow needs for the execution of program's activities. The twelve-month financial plan will serve as the basis for advance of funds disbursements. Disbursement of advances of funds will be for the equivalent of funding needs required for three months of program execution. Fund flows will be executed as stated in ¶6.3.