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MULTILATERAL INVESTMENT FUND

**HAITI**

**MANGO AS AN OPPORTUNITY FOR LONG-TERM ECONOMIC  
GROWTH**

**(HA-M1034)**

**DONORS MEMORANDUM**

This document was prepared by the project team consisting of Estrella Peinado-Vara (MIF), Project Team Leader; Maria Teresa Villanueva (MIF); Alejandro Escobar (MIF); Pilar Meier (MIF); Jempsy Fils-Aimé (MIF/CHA); Gilles George Damais (RND/CHA); Ariel Rodriguez (PDP/CHA); Marise Etienne Salvane (PDP/CHA); Carlos de Paco (ORP/ORP); Ximena Rojas (MIF); Oscar Farfán (MIF); and Anne Marie Lauschus (LEG/NSG).

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## ABBREVIATIONS

ANEM	National Association of Mango Exporters
AWP	Annual work plan
BA	Business Advisor
FAO	Food and Agriculture Organization
PBG	Producer Business Group
FOB	Free on Board
IDB	Inter-American Development Bank
IMF	International Monetary Fund
M&E	Monitoring & Evaluation
MSC	Market Service Center
MT	Metric tons
NGO	Non-governmental organization
PSR	Project Status Report
SBA	Senior Business Advisor
TCCC	The Coca-Cola Company
TNS	TechnoServe
USAID	United States Agency for International Development
USDA	United States Department of Agriculture

# MANGO AS AN OPPORTUNITY FOR LONG-TERM ECONOMIC GROWTH

(HA-M1034)

## I. EXECUTIVE SUMMARY

<b>Executing agency:</b>	TechnoServe Inc.	
<b>Beneficiaries:</b>	15,000 mango farmers and their families, trading firms which secure long-term market linkages and their employees, and at least three processing firms which would commence operations and would secure markets. Secondary beneficiaries would be 10,000 other farmers that will learn about the participating farmers' experience and members of the communities who would benefit from the increased economic activity.	
<b>Financing:</b>	MIF (Nonreimbursable)	US\$3,055,218 (40%)
	Local counterpart:	US\$4,608,192 (60%)
	<b>Total:</b>	<b>US\$7,663,410 (100%)</b>
<b>Objectives:</b>	The goal of the project is to contribute to improving income growth opportunities for smallholder farmers and other actors in the mango value chain. The objective is to develop a sustainable and inclusive value chain business model that increases the income of at least 15,000 smallholder mango farmers, creates employment and enhances fresh and processed mango exports. It will seek to organize small producers, increase their productivity, and increase their participation into the mango value chain. It is expected that this model can be replicated in other value chain sectors in Haiti.	
<b>Execution timetable:</b>	Execution period:	60 months
	Disbursement period:	66 months
<b>Special contractual clauses:</b>	Conditions precedent to the first disbursement will be presentation, to the Bank's satisfaction, of: (i) evidence that the Government of Haiti has granted the waiver to TechnoServe to start operation in Haiti before finishing the respective registration process; (ii) agreement signed between TechnoServe and The Coca-Cola Company (TCCC) that reflects the commitment of TCCC to provide the funds for the counterpart resources; (iii) the annual work plan (AWP) for year one and the milestone plan for the life of the project; (iv) evidence that the project Operating Regulations are in effect; and (v) evidence that the General Coordinator and Regional Coordinators have been hired.	

The project will be executed initially from TechnoServe's

Washington, D.C. office while it sets up its local office in Haiti. Once the local office is in place, the Bank will conduct a due diligence to ensure that the project can be properly executed from Haiti.

<b>Environmental and social review:</b>	This operation was reviewed by ESR (meeting 13-10) on April 29 2010 and the observations made at the meeting were incorporated into the Draft Operating Regulations. The project has been classified as a category “C” operation.
<b>Coordination with other donors:</b>	The project will include coordination on an as-needed basis with the USAID project WINNER.
<b>Exceptions to Bank policy:</b>	None.

## II. BACKGROUND INFORMATION

- 2.1 **Haiti and the mango sector.** Haiti is among the 20 largest mango producers globally, with a production of 200,000-400,000 metric tons (MT) per annum (p.a.). India is by far the largest mango producer with a production of more than 13 million MT annually, followed by China, Mexico, Indonesia and Thailand.<sup>1</sup> India is also the largest exporter of mango (exports of 241,000 MT in 2007), followed by Mexico (236,000 MT, 2007) and Brazil (116,000 MT in 2007). Main importers are the United States (imports of almost 300,000 MT in 2007) and the United Kingdom (57,000 MT in 2007). The Latin America and Caribbean region generally export mango to the United States, whereas Europe is the main export market for Asian and African mango exporters.
- 2.2 Haiti is among the world’s poorest countries – a situation worsened by the 2010 earthquake. Haiti has a GDP per capita of US\$1,300 per year and approximately 80% of the population lives on less than US\$2 a day. The country also suffers from environmental degradation, food insecurity, poor infrastructure, and an illiteracy rate of 48%<sup>2</sup>. On the economic front, Haiti’s main industries are apparel, oils, cocoa, mangoes and coffee. More than 60% of the population relies on agriculture. Haiti has a trade deficit with imports of US\$2,023 million and exports of US\$524 million. Main trade partners are the United States (70%), the neighboring Dominican Republic (9%), and Canada (3%). The country relies heavily on remittances from the Haitian Diaspora (US\$1,800 million p.a.) and foreign aid (US\$912 million p.a.), which both by far exceed exports.<sup>3</sup> In the last decade, Haiti

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<sup>1</sup> FAO.

<sup>2</sup> Adults above 15 years.

<sup>3</sup> Pre-earthquake aid was mainly received from the United States (28%), Canada (16%), the Inter-American Development Bank (IDB, 13%), and the International Monetary Fund (IMF, 11%).

has been badly affected by natural disasters such as hurricanes and most recently the January 2010 earthquake that killed more than 220,000 people and left more than a million people homeless.<sup>4</sup>

- 2.3 The country's mango sector is believed to have considerable potential to support Haiti's journey out of poverty. It is estimated that close to 200,000 farmers have some mango trees in production. To provide clarity on the number of mango farmers in Haiti, the Haitian government is currently carrying out a country wide inventory of mango trees, with the results expected in 2011.<sup>5</sup> The Haitian mango enjoys strong demand worldwide and provides well-needed nutrition for local consumption in this food insecure country. The mango value chain, or industry, can serve as an engine for development through increased fresh exports and exports of processed mango. In addition, the mango industry should be accompanied by a diversification into other crops to make better use of capacity over the year (mango is a highly seasonal crop) and to reduce the vulnerability of smallholder farmers to variations in mango production and marketing.
- 2.4 **The market for Haitian mangoes.** Haiti could significantly increase the economic yield from its mango industry by increasing overall production and improving the share of exportable quality. Among the more than 100 different mango varieties that are grown in Haiti, Francisque is the only one that is exported. Annual Francisque production amounts to approximately 40,000 MT but only 10,000 MT is exported each year which is between 2.5-5% of Haiti's total mango production (including other mango varieties).<sup>6</sup> Most of the Francisque production does not meet the export markets quality standards. There is a large waste of mango, between 70 and 80% of the fruit is lost from tree to exports, due to lack of technical expertise and resources that causes early mango picking and poor logistics (bad handling and domestic transportation) that damages the fruit. Remaining mango is either consumed locally or wasted. There is currently very limited local processing despite numerous previous and ongoing attempts to set up a local processing industry. Haiti's mango exports have not increased in the last two decades. Reasons for this include low financial returns from mango production (farmers cut down their trees to use as fuel and timber), natural disasters, fruit fly infestation (in 2007), poor establishment of newly planted trees due to uncontrolled goat predation, etc.
- 2.5 It is important to note that the majority of mango producers have to have sources of income other than their mango production to live on. The mango industry is restricted by poor linkages between supply and demand. Before the harvest season, intermediaries ("fournisseurs") often visit mango farmers and offer to buy their fruit on the tree at a low price with part of the payment paid in cash in advance. Farmers in dire need of money accept to sell their produce although the price is lower than what they would receive a few months later once the fruit is ripe. Farmers who are organized in cooperatives often wait longer before harvesting, and the cooperatives

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<sup>4</sup> Government of Haiti, PDNA

<sup>5</sup> FAO; Damais, Bellande 2004; DAI; Interviews

- often play the role of the intermediary which leaves a higher share of the price to the farmer. However, relatively few farmers are organized in cooperatives that can support them and facilitate negotiation with local buyers.
- 2.6 The National Association of Mango Exporters (ANEM), was founded in the 1980s and aims to coordinate the work of Haiti's nine main mango exporters. ANEM plays mainly the role of coordinator with USDA regarding safety standards. Exporters need to go through ANEM to receive USDA approval and the association decides how fees of USDA inspection are distributed. ANEM is a relevant stakeholder in the mango value chain and will participate in the project to address some of the industry challenges through their organization.
  - 2.7 **Mango processing.** Haiti has no substantial local processing of mangoes. Local processing would ensure local value addition and complement exports by increasing the demand for export rejects. The technology required for large scale processing of mango is not available in Haiti today. Several exporters are interested in investing in such technology but lack access to credit. Investment in mango processing is hampered by limited access to finance and logistical services, unpredictable supply and lack of market linkages.
  - 2.8 **Proposed project and additionality.** The lessons learned from MIF in other similar projects in agricultural value chains are that focusing on just one aspect or part of a value chain does not give a sustainable improvement in its efficiency and in the economic success of its stakeholders. The project will take a genuine long-term investment in Haiti, in order to create a highly competitive, profitable and sustainable Haitian mango industry, instead of looking for short-term quick fixes that are typically unsustainable. This will be a 5-year project targeting at least 15,000 farmers with the objective to increase production and producer revenues. Farmers' income could increase by improving productivity and the quality (reduced wastage) sold to exporters.
  - 2.9 The Project will coordinate with USAID's WINNER, a broad-based program that acts in many agricultural value chains including mango. This Project will also coordinate closely with the ongoing Bank project "Rural chains Enhancement" (loan 1794/SF-HA, 2007-2012). This loan currently supports the rehabilitation of four applied agronomical research centers, one of them with the purpose of restoring a botanic collection of mango varieties (Levy). It also will finance a large training program for local grafting and pruning technicians and contribute with market linkages in the Levy research center area. In addition, this project will complement activities that will be implemented through the Social Entrepreneurship Program Project ATN/SF-12024-HA, "Job Creation for Small-Scale Agricultural Producers through the Carifresh Fruit Value Chain" approved in December 2009.
  - 2.10 The project is also developing a unique partnership model, in coordinating efforts with The Coca Cola Company (TCCC) and TechnoServe (TNS), a not for profit organization with global experience in strengthening agricultural value chains with

a business approach. While TNS will be the main executing agency of this project, TCCC will be providing financial resources for the execution and implementation of the project. In addition to its cash contribution to support the project, in the future, there is strong potential for TCCC and its Latin Center Business Unit to be able to purchase a portion of the mango fruit juice produced by the small farmers in this project. Also, in addition to its contribution to the project, the company would make in-kind investments including juice processing knowledge, capital investments and research and development expertise. These investments are not included in its local counterpart totals. A portion of the funds that TCCC will invest in this project would be generated by sales of the Odwalla Haiti Hope promotional beverages in the United States. Its first edition, Mango Lime-Aid, is being sold since late March 2010 in stores such as Whole Foods, Safeway and Wal-Mart. One hundred percent of TCCC profits from the sale of the Odwalla Haiti Hope beverages will be designated to fund this Project, and some of the retailer partners have already offered to contribute with part of their profit margins to the Project. TNS will sign agreements with all the organizations providing resources for this Project.

### **III. PROJECT OBJECTIVES AND DESCRIPTION**

#### **A. Objectives**

- 3.1 The goal of the project is to contribute to improving income growth opportunities for smallholder farmers and other actors in the mango value chain. The objective is to develop a sustainable and inclusive value chain business model that increases the income of at least 15,000 smallholder mango farmers, creates employment and enhances fresh and processed mango exports. It will search to organize small producers, increase production and productivity, and increase their participation into the mango value chain. It is expected that this model can be replicated to other value chain sectors in Haiti.

#### **B. Components**

##### **Component 1: Empower Producer Business Groups (PBGs) (MIF: US\$1,996,024; Counterpart: US\$1,633,110)**

- 3.2 Through initial surveys and market analysis, all stakeholders agreed that the lack of organization at the production level is perhaps one of the greatest limitations for the growth of the sector. Therefore, the objective of this component is to create or strengthen organizations made up of small mango producers called Producer Business Groups-PBG. The focus will be on training and technical assistance for producers to improve quality and productivity and post-harvest handling to reduce waste. In addition, the PBGs will receive training and support in basic business skills. PBGs will: (i) receive support for their formation; (ii) receive training on productivity measures (tree management, top-working and grafting, tree replanting) and business skills (such as financial literacy, bookkeeping, organization, governance and business planning); (iii) support for tree replanting; (iv) support

- through access to credit for inputs and in some cases other types of small funding for inputs (seedlings and tree tending tools) and other needs through a performance-based scheme (up to 20 awards of less than \$10,000 each to the best performing PBGs); (v) establish partnerships with research institutions to identify varieties suitable for processing; (vi) set up Market Service Centers (MSC); (vii) establish relationships directly with exporters; (viii) improve post-harvest handling; (ix) receive support to identify and explore farm-level value-added pre-processing opportunities; (x) identify crops for diversification; and (xi) provide training to help farmers diversify into other income-generating activities.
- 3.3 PBGs will be established in high-potential areas selected on the basis of quality and volumes of current production, agronomic suitability (soil, climate, etc.), quality of local industry players (producers, cooperatives etc.), land availability and infrastructure. The regions' need for reforestation and economic growth will also be taken into account<sup>7</sup>.
- 3.4 The focus will be in helping PBGs to evolve into formal businesses, rather than remain as traditional cooperatives. To select farmers for the PBGs, the project will use a member selection scorecard that will evaluate criteria such as current production, current number of trees, current yield per tree, microclimate, entrepreneurship and organization in cooperatives. The project participants must meet at least the following preliminary tentative eligibility criteria: (i) have at least an average of five mango trees; (ii) utilize between 0.5-5 Has of land; (iii) have average yearly income of less than US\$1,000; (iv) be willing to monitor and keep records of accounting and operations management of mango production, and (v) be willing to receive technical assistance, attend training activities, and share knowledge with other mango producers.
- 3.5 As PBGs mature, they will evolve into business units that reach greater economies of scale and provide additional services to the community called Market Service Centers (MSCs), associations of multiple PBGs that come together and serve as a hub for the region. MSCs will improve farmer income by increasing purchasing power, strengthening negotiating power, and providing additional services beyond the PBGs.
- 3.6 Expected outcomes include: (a) the creation of groups of partnering producers or the strengthening of existing organizations; (b) an increase in mango production for participating beneficiaries; (c) an increase in income generated by mango producers from selling mangos as well as by diversifying their crops. These groups will be able to increase their direct sales to exporters and processors capturing a larger percentage of the value added in the mango value chain. By the end of the project PBGs will have improved administrative capabilities and will have established

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<sup>7</sup> Preselected areas include Gros Morne (Artibonite), Mirebalais (Bas Plateau/Plateau Central), Léogane (Ouest), Cul de Sac (Ouest), Cabaret (Ouest) and Petite Rivière (Artibonite).

mechanisms for collection, tracking, and payment to their members with the support of the MSCs.

- 3.7 Special attention will be devoted to the role of women in the PBGs to ensure their participation in group leadership. The training will also include the environmental and labor best practices to maximize social and environmental impacts.

**Component 2: Foster competitive local processing businesses (MIF: US\$398,824; Counterpart: US\$326,311)**

- 3.8 Local processing could increase the economic value of Haiti's mango industry significantly. It would provide an alternative market channel for mango rejects and clear incentives to producers to increase their production. The objective of this component is to provide support to local entrepreneurs in establishing new processing factories – including helping them with business planning and capital-raising, per their needs. TCCC's local and international supply chains and markets will provide support in this effort and will help identifying the currently available varieties best suited for processing into fruit juice both for the domestic market and for export. The lead entrepreneurial investors would be most likely local traders or processors of other goods.

- 3.9 Support to local institutions, organizations and entrepreneurs will be given through technical assistance to: (i) establishing new processing factories – including feasibility studies, business planning and capital-raising assistance, per their needs – and design the right mechanism to include local ownership; and (ii) explore the viability of introducing new mango varieties for processing.

- 3.10 Expected outcomes include: (a) at least one processing plant operating with local participation; (b) PBGs selling directly to processing plant(s); and (c) processing plants fully compliant with international environmental standards.

**Component 3: Facilitate a supportive enabling environment (MIF US\$271,562; Counterpart US\$222,187)**

- 3.11 The impact of the activities described in Component 1 and 2 partially depends on a number of enabling factors that will need to be addressed. The objective of this component is to contribute to the improvement of some conditions that will help in strengthening the mango value chain in areas such as stakeholders organization; addressing logistical and supply constraints; supporting local institutions in activities such as dissemination of price and market signals and relevant agronomic information to farmers and producer groups.

- 3.12 The activities in this Component will include: (i) collaborating with other partners, donors and the Government to prioritize infrastructure projects; (ii) addressing as a sector how to lower current indirect export costs; (iii) develop mechanisms for market intelligence and fair competition promotion among exporters; and (iv) strengthen governance, membership and broaden participation of different actors of the mango value chain within ANEM structure.

- 3.13 The expected outcomes will raise awareness and provide potential solutions (for public and private partners to implement) about: (a) improving basic infrastructure that would facilitate correct transportation and a higher percentage of mango reaching the export plants in optimal conditions; (b) indirect export costs which if lowered would facilitate increasing exports of mango; and (c) feasible alternatives for accessing new mango production land to increase total production and meet export markets demands.

**Component 4: Knowledge management, impact evaluation and project result dissemination (MIF US\$313,498; Counterpart US\$256,498)**

- 3.14 The project will include a monitoring and evaluation (M&E) and knowledge management system that will allow for an on-going learning process. Strong emphasis will be put on monitoring and impact evaluation. The monitoring and impact evaluation (M&E) system will have four elements: monitoring and reporting of project progress against targets; evaluation of project achievements and identification of areas for improvement; randomized trials; and surveys of standards of living.
- 3.15 At the start of the project, a monitoring and reporting system will be implemented to measure progress against targets to capture the full impact of interventions. This will involve several types of activities – the setting up of data collection and reporting processes, periodic analyses and assessment of outcomes against initial targets, and providing support to PBGs in maintaining adequate records. This component will also seek ways to adapt this value chain model to other agriculture or livestock sectors. In the same token, all this information will be used to transfer knowledge to local public and private entities.
- 3.16 The activities in this Component include: (i) review the project’s overall strategy based on market data and impact evaluation results; (ii) develop knowledge products based on the project’s learning and experience; (iii) designing an exit strategy for the executing agency to transfer all the knowledge and expertise to local actors including Ministry of Agriculture and Faculty of Agronomy; (iv) participation in national and international events to disseminate the knowledge generated by the project and its results; (iv) design and implementation of an impact evaluation strategy for the Project; and (v) identify and provide an action plan for other potential sectors in which this model could be replicated based on strategic partnerships.
- 3.17 The expected outcomes of this component are: (a) monitoring and knowledge strategy in place; (b) dissemination of lessons learned; (c) methodology in place to measure the impact that this project will achieve in the beneficiary population; (c) local capacity built to continue promoting and improving the mango value chain; and (d) knowledge transfer to stakeholders and partners to replicate this model into other value chains.

#### IV. COST AND FINANCING

- 4.1 The total cost of the project will be US\$7,663,410. The MIF will contribute US\$3,055,218 as non reimbursable technical cooperation while the counterpart will contribute \$4,608,192, of which at least 50% must be in cash. The project will have an execution period of 60 months and a disbursement period of 66 months. TNS will be responsible for the entire counterpart contribution, which will be financed mainly by The Coca-Cola Company (TCCC).
- 4.2 It is important to consider that the budget takes into account the additional cost and effort to operate a project in post-earthquake Haiti.

Components	MIF	Local contribution	TOTAL	% MIF resources
Component 1: Empower Producer Business Groups (PBGs)	\$1,996,024	\$1,633,110	\$3,629,134	65%
Component 2: Foster competitive local processing businesses to increase local value addition	\$398,824	\$326,311	\$725,135	13%
Component 3: Facilitate a supportive enabling environment	\$271,562	\$222,187	\$493,749	9%
Component 4: Knowledge management and project result dissemination	\$313,498	\$256,498	\$569,996	10%
<b>Total components</b>	<b>\$2,979,907</b>	<b>\$2,438,106</b>	<b>\$5,418,013</b>	<b>98%</b>
Project coordination	\$0	\$ 2,170,086	\$2,185,021	0%
Knowledge management (1%)	\$30,552	\$0	\$30,100	1%
Impact evaluation (0.5%)	\$15,276	\$0	\$15,276	0.5%
External audits	\$14,935	\$0	\$0	0%
Unforeseen	\$14,548	\$0	\$15,000	0%
<b>TOTAL</b>	<b>\$3,055,218</b>	<b>\$4,608,192</b>	<b>\$7,663,410</b>	<b>100%</b>

- 4.3 **Sustainability.** Three factors will contribute to the project's long term sustainability: (i) ANEM and the export companies have all expressed a strong interest in participating in the project; (ii) the plan for the involvement of extension agents centers on the training of individual producers who serve as an example for the gradual incorporation of new producers; and (iii) the creation of Market Service Centers (MSCs). The MSCs will be set up by multiple PBGs that come together to build a physical plant to serve as a hub for the region. MSCs will improve producer income by increasing purchasing power, strengthening negotiating power and providing additional services beyond the PBGs. As self-sustaining commercial

entities operating at scale, managed by professional staff and owned by farmers, MSCs are ultimately expected to evolve into service providers that can fulfill the role initially played by TNS and other NGO partners. Market research indicates that exports could double without reducing prices if larger volumes of high quality mangoes were available.

- 4.4 This project will have a transformative role beyond project activities. This will be achieved through: (a) engaging local private and public sector actors and nonprofit sector partners; (b) establishing long-term market linkages between key parties; (c) building local capacity, through knowledge transfer, and enhancing the enabling environment; and (d) investing in human capital through collaboration with local private and public institutions and hiring local project staff.

## V. EXECUTION MECHANISM

- 5.1 **Executing agency.** The executing agency will be TechnoServe (TNS). TechnoServe is a US-based 501(c)(3) nonprofit development organization established in 1968, whose mission is to help reduce poverty by working with entrepreneurial men and women to create competitive and sustainable businesses. TNS is active in over 20 countries in Latin America, Africa and India to implement economic opportunities with high potential for creating jobs and income for the poor. TNS has extensive and compelling experience in horticulture project, highly skilled staff with unique expertise, as witnessed by the recently launched mango project that will reach 50,000 farmers in Kenya and Uganda, in collaboration with Coca Cola and the Gates Foundation. TNS has been operating in Haiti from July 2009, as part of the consortium implementing a USAID-funded 5-years project aiming at facilitating the flow of financing to Haitian micro, small and medium enterprises. TNS has worked with MIF over the past several years including the ongoing Latin American Six Country Business Plan competitions program executing successfully.
- 5.2 **Execution mechanism.** A project executing unit consisting of a full-time project manager reporting to TechnoServe's country director and ultimately to the TNS Latin America and Caribbean regional director. The project manager will be responsible for timely and effective implementation of the project activities such as project planning, overall implementation of the project, and delivery of results as per the project workplan and agreed-upon milestones. The project will be executed initially from TechnoServe's Washington, D.C. office while it sets up its local office in Haiti. Once the local office is in place, the Bank will conduct a due diligence to ensure that the project can be properly executed from Haiti. The executing agency will design a plan to ensure the transition from the Washington, D.C. office to the local Haiti office.
- 5.3 A Deputy Project Manager will drive the initial mobilization of the project for the first 18 months to ensure an effective project start and be responsible for operations. Two regional field offices will be set-up. These two offices were selected based on

the identified producing regions. These regions are very different from one another and would need slightly different approaches. Each office (two field offices and one head office) will have a Senior Business Advisor (SBA) and will manage a team of 3 business advisors (BAs) and technical experts. A senior external advisor will be committed to the project on a part-time basis to support the Project Manager, particularly in relationships with stakeholders critical for the sustainability and replication of results such as the Government of Haiti. A Monitoring and Evaluation (M&E) manager will be responsible for the continuous evaluation of the project against targets and milestones, and the iterative improvement of the project based on the quarterly analysis of productivity and economic data.

- 5.4 In the start-up phase a Steering Committee will be formed to provide overall guidance and support in overcoming any strategic challenges for the project. The Steering Committee will strengthen the project by advising its management on strategies, policy issues, concerns and new developments in the industry, as well as other issues of relevance to the project. It will provide a mechanism for the project to inform key decision-makers in the industry. It will also build support for the project among key stakeholders and regulators in the mango industry in Haiti. The exact objectives and meeting format of the Steering Committee will be determined in the start-up phase. The Steering Committee will include senior representatives from the Bank, TCCC and TechnoServe.
- 5.5 The project team staff member will have the right balance of technical and business skills to execute the project successfully. TCCC will play an important role in providing expertise in mango processing and demand for Haitian mango. To make best use of the resources available to the project, the project will partner with existing organizations to draw on their expertise and support in implementing the project. A thorough monitor and evaluation (M&E) program will be set up to ensure that results are achieved.
- 5.6 Training and technical assistance activities will be financed for agricultural extension agents and specific groups of mango producers who will train other producers in their area. In the first year, 45 PBGs with 100 farmers each will be set up in 3 regions (Gros Morne, Mirebalais, Léogane).<sup>8</sup> To achieve this, TNS will work with existing cooperatives to enhance their business model and provide additional services to their members. Many of the existing cooperatives are however fairly well organized and would form a good basis for PBGs. After two years it is expected that the best performing farmers will be selected as local consultants to mobilize and train new groups in their vicinity.
- 5.7 **Disbursement by results.** There will be a first disbursement of 10% of the MIF contribution upon the fulfillment of the conditions precedent. Subsequent disbursements will be contingent upon the achievement of milestones, which along with their means of verification will be agreed between the executing agency and

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<sup>8</sup> Based on TechnoServe's previous experience a time frame of 6 months is required for farmers groups to get organized.

the MIF. The project executing unit will have to prepare and submit an annual work plan (AWP) for consideration for each year of the project. The executing agency may negotiate with the Bank to modify the disbursement milestones provided they have not expired. The disbursement milestones may be rescheduled during the annual planning exercise for the following period. Achievement of milestones does not exempt the executing agency from responsibility for reaching the project objectives set out in the logical framework.

- 5.8 **Procurement of goods and consulting services.** The procedures followed by the executing agency to procure goods and services must comply with the Bank's policies on procurement of goods and consulting services (documents GN-2349-7, GN-2350-7 and OP-387-1), and with the MIF's procurement guidelines. As the institutional risk relating to procurement of goods and services was low, project procurement will be reviewed ex post semiannually. The procedures must ensure transparent and competitive processes, as well as the most economical costs. The executing agency must facilitate the periodic review by the Bank of expense receipts and procurement procedures to ensure that they conform to the Bank's policies. The executing agency will also update the procurement plan at least once a year.

## VI. MONITORING AND EVALUATION

- 6.1 **Financial supervision.** The executing agency will establish and assume responsibility for keeping adequate financial accounts, internal control mechanisms, and filing systems for the project in accordance with IDB/MIF accounting and auditing rules and policies. An interim and final audit will be performed on the project financial statements. Supporting documentation for disbursements will be reviewed ex post on a semiannual basis. Application and frequency of these reviews, as well as the frequency of the audit, may be modified by the MIF based on the results of reviews and/or subsequent institutional evaluations performed by the MIF during project execution. The Bank/MIF will hire independent auditors at the beginning of the project to audit the financial statements and perform the ex post review of procurement and disbursement processes. The cost of the audits and ex post reviews will be covered by the MIF contribution as permitted under Bank procedures.
- 6.2 **Project Status Reports.** The project executing unit will present Project Status Reports (PSRs) to the Bank within sixty (60) days after the end of each semiannual period, or more often, on the dates determined by the MIF. These reports will follow a format previously agreed with the MIF and contain information on project execution, achievement of milestones, and outcomes, and their contribution to the project objectives. The reports will also discuss compliance with the environmental and social issues discussed in paragraphs 8.1 and 8.2 of this document. Within ninety (90) days after project completion, the project executing unit will submit to the MIF a final PSR describing in particular the outcomes achieved, the sustainability plan, and the lessons learned.

- 6.3 The project includes two evaluations: one midterm and one final evaluation by a consultant specializing in agricultural sector issues with groups of small rural producers selected and contracted directly by the Bank. The evaluation will be based on the logical framework and should analyze the following areas: (i) relevance, effectiveness, and the extent to which the project objectives have been achieved; (ii) quality of services offered; (iii) sustainability of the project (in technical, economic, financial, social, and institutional terms) once the MIF contribution has ended; (iv) possibilities for expansion or replication of the experience; and (v) outcomes achieved at the purpose level.
- 6.4 The midterm evaluation will be made 24 months after the first disbursement or when 50% of the committed resources have been disbursed. The midterm evaluation must also include: (a) the relevance of the project components and activities for achievement of the defined objectives; (b) an assessment of progress made during the project; (c) results achieved in executing the components; (d) deviations from the project execution; (e) lessons learned during project execution; (f) outcomes of project team training activities in terms of promoting and facilitating the inclusion of women in training and technical assistance activities; and (g) recommendations that are ultimately considered necessary to fine-tune project execution to achieve the defined goals. In particular, the quantitative and qualitative indicators defined in the logical framework will provide guidance. Based on the status reports and midterm evaluation, the MIF team in charge of project supervision will perform an analysis to determine whether the project should continue, be fine-tuned, restructured, or even partially or totally canceled.
- 6.5 The final evaluation will be carried out at the end of the project or when 95% of resources have been disbursed and will consider the following aspects in addition to those addressed in the midterm evaluation: (i) progress made in increasing the participation of PBGs in the mango value chain; (ii) changes observed in the management of PBGs and accomplishments in increase productivity and lowering mango rejects as well as in terms of business and organizational management, including gender and nutritional considerations; (iii) improvements in management of processing and quality logistics; (iv) the project's achievements with respect to the indicators set out in the logical framework and conclusion as to the probability of achieving the defined impacts; (v) lessons learned and recommendations for replication to other value chains in Haiti; and (vi) local capacity generated to guarantee the sustainability of the intervention.
- 6.6 One year before project completion, a workshop will be organized to jointly assess outcomes achieved and identify tasks to ensure the sustainability of actions.

## VII. BENEFITS AND RISKS

- 7.1 **Benefits.** The project is expected to have significant impact on produced volumes and producer income. In addition to the financial benefits, the project will create

new jobs, reforest land and promote women's role in farming communities. The project aims to increase Francisque mango production by about 40% in 5 years from the current level of approximately 40,000 MT, and to increase PBG producer income through the increased volumes and higher prices. This is based on the assumption that the typical PBG has 0.5-1 hectares of land, on average 10 mango trees; and annual revenue from mango of US\$120 at the start of the project. The production will increase by improving productivity and reducing mango rejects. Improved productivity measures and reduced waste at farm level are estimated to contribute approximately 6-8 MT (60%) of the total increase by year 5 through better planting and harvesting management. Increasing the density of mango trees in existing plots and orchards could increase production up to an estimated 5-7 MT (40-50%) with large additional potential after the project.<sup>9</sup>

- 7.2 **Risks.** The project mitigates the following: Natural disaster risks. The first is the risk of natural disasters that could directly affect mango production or the infrastructure that the mango value chain depends on (roads and ports). While this is a tangible and real threat, mango production in Haiti is quite diversified in terms of geographical locations. There are three main production areas and about 10 sub regions of production. Thus, while the likelihood of catastrophic events, such as repeat earthquakes or hurricanes cannot be discounted. Geographical dispersion is a mitigant. Market Risk. The market for Haitian mango has seen a steady and stable increase in demand. This project is actually addressing supply constraints. But it is hard to predict the entrance of new players with the same varieties of mangos that Haiti exports. And this could have a negative effect on prices and demand for Haitian mango. To mitigate this risk, the project will maintain systems of market intelligence that keep the local sector up to date with market trends, and other suppliers. The mango exporters of Haiti are also seasoned players in the global mango markets, and have learned to quickly adapt to changes in the market conditions.

## VIII. ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

- 8.1 The project will work with existing small mango producers to improve production practices and their possible impact on the environment. It also includes training and technical assistance in good agricultural practices. The project will be well-equipped to address some of the greatest challenges that Haiti faces: (a) food insecurity as increased income and crop diversification will contribute to greater food security; (b) environmental degradation through reforestation and good agricultural practices including training on good stewardship of local environmental resources and good pest management practices that are not environmentally

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<sup>9</sup> This is based on the assumption that density of orchards could be increased to up to 10X10 meters. Mango trees are often scattered across several patches of land and well-structured orchards are still rare in Haiti. The highest density observed by the project team during field visit is 9X9 meters, but most trees are planted more than 20 meters from each other. Examples from mango cultivation in India shows successful mango production at ultra-high density planting at 2X3 meters.

harmful. In accordance with the Bank's toolkit, this project has been classified as a category "C" operation.

- 8.2 The project will ensure that women producers are empowered through the PBGs. Women's access to PBGs and MSCs will be closely monitored to ensure that it equals participation by men. The project will ensure that trainings are provided to women and women's groups in leadership and group dynamics.
- 8.3 The project must comply with applicable local environmental legislation. The project will take into account and comply with the exclusion lists of the Stockholm Convention on Persistent Organic Pollutants (POP), the Rotterdam Convention on Hazardous Chemicals and Pesticides as well as that of the Bank. It will also include basic criteria for environmental and social evaluation through the monitoring system. The PSRs must report on compliance with the environmental and social considerations specified above.

HA-M1034: MANGO AS AN OPPORTUNITY FOR LONG-TERM ECONOMIC GROWTH

**LOGFRAME**

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<b>GOAL</b>			
<p>Contribute to improving income growth opportunities for smallholder farmers and other actors in the mango value chain.</p>	<p>3 years after the Projects completion:</p> <ul style="list-style-type: none"> <li>• Approximately 25,000 mango farmers show positive income growth in real terms</li> <li>• The mango value chain supports at least 500 formal jobs and shows a positive rate of job creation</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline from farmer survey and other market research in the first 6 months of the Project (e.g., current formal jobs in mango value chain)</li> <li>• Farmer survey and other market research in year 5 versus baseline</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• No major political, economical or environmental shocks in Haiti</li> <li>• The mango industry continues to enjoy access to major export markets</li> </ul>
<b>OBJECTIVES</b>			
<p>Develop a more competitive, sustainable and inclusive mango value chain that increases the income of smallholder mango farmers, creates employment and enhances fresh and processed mango exports.</p>	<p>At the end of the Project:</p> <ul style="list-style-type: none"> <li>• 15,000 farmers increase income by at least 50% on average</li> <li>• At least 10% increase in total value of mango exports</li> <li>• Project beneficiaries show higher rates of income and export growth vis-à-vis a control group not participating in the project</li> <li>• Improved women's role in the mango value chain measured by an increase of 5% in the share of women employed in the value chain and an increase of 20% in women's representation in farmer groups (to be confirmed by baseline review)</li> <li>• At least 1 mango processing plant operational and at breakeven.</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline from farmer survey in the initial phase of the Project</li> <li>• Farmer survey in year 5 compared to baseline</li> <li>• Mid-term survey to assess progress after 30 months</li> <li>• Export data</li> <li>• Evaluation of processing plant profitability in year 5</li> <li>• Final Project Evaluation</li> <li>• PSR</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• No major political, economical or environmental shocks in Haiti</li> <li>• Not particularly bad weather conditions in year 5</li> <li>• No price shocks to global mango market</li> <li>• No major pests strike Haiti and/or efficient pest management</li> <li>• Availability of investors willing to invest in processing (depends on availability of varieties that can be processed, price of export rejects compared to other processing markets)</li> <li>• Private sector is promoting investment in infrastructure in project regions</li> <li>• Project activities will have a positive impact on reforestation and food security</li> </ul>
<b>COMPONENTS</b>			
<p><b>1. Empower Producer Business Groups (PBGs)</b></p>	<p>The Project will achieve the following in 60 months:</p> <ul style="list-style-type: none"> <li>• Increased production per PBG farmer by at least 30%</li> <li>• At least 25% of PBGs sell directly to exporters and processors</li> <li>• At least 10% of PBG farmers cultivate selected crops for</li> </ul>	<ul style="list-style-type: none"> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Report on suitable varieties</li> <li>• Mid-Term and Final Project Evaluation</li> <li>• PSR</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Number of mango farmers in Haiti exceeds 200,000</li> <li>• Varieties suitable for replanting are available</li> <li>• PBGs and other players obtain access to suitable sources of debt and equity finance</li> <li>• Farmers willing to grow and</li> </ul>

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p><b>2. Foster competitive local processing businesses</b></p>	<p>diversification</p> <ul style="list-style-type: none"> <li>At least 20% increase in women's representation in PBG<sup>1</sup></li> </ul> <p>The Project will achieve the following in 48 months:</p> <ul style="list-style-type: none"> <li>At least 10% of PBGs sell directly to exporters and processors</li> <li>At least 5% of PBG farmers cultivate selected crops for diversification</li> </ul> <p>The Project will achieve the following in 60 months:</p> <ul style="list-style-type: none"> <li>At least 1 local processing plant functioning (breaking even) and operating with local participation</li> <li>At least 20% of PBGs sell to processing plant(s)</li> <li>At least 50% of employees at processing plant are women; women have senior roles</li> <li>Processing fully compliant with international environmental standards</li> </ul> <p>The Project will achieve the following in 48 months:</p> <ul style="list-style-type: none"> <li>Local processing plant under construction</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation of processing plant profitability</li> <li>PBG farmer survey</li> <li>Mid-Term and Final Project Evaluation</li> <li>PSR</li> <li>Impact evaluation</li> </ul>	<p>market other crops</p> <ul style="list-style-type: none"> <li>Availability of investors willing to invest in processing (depends on availability of varieties that can be processed, price of export rejects compared to other processing markets)</li> <li>Availability of varieties that can be processed in Haiti</li> </ul>
<p><b>3. Facilitate supportive enabling environment</b></p>	<p>After 60 months, the Project will have ensured that:</p> <ul style="list-style-type: none"> <li>Increased active membership in exporter organization; at least 80% of all exporters participate actively in the association's meetings</li> <li>Exporter organization has introduced two new initiatives to help the sector</li> <li>At least 2 initiatives to reduce</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of exporter organization</li> <li>Public data on infrastructure</li> <li>Mid-Term and Final Project Evaluation</li> <li>PSR</li> <li>Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate partners available (e.g., parties can agree)</li> <li>Access to new land is viable</li> </ul>

<sup>1</sup> To be confirmed by baseline review

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p><b>4. Knowledge management and dissemination</b></p>	<p>exporter cost, e.g., reduced fees, improved efficiency</p> <p>After 60 months, the Project will have ensured:</p> <ul style="list-style-type: none"> <li>• Suitable partners have agreed to support Project activities after Project end (e.g., banks, Ministry of Agriculture)</li> <li>• Replication of the business model to other crops</li> <li>• 5 case studies to transfer knowledge to university students and staff and lessons learnt to other projects</li> <li>• Disseminated the experience to an additional 10,000 PBG farmers to increase their future productivity and income</li> </ul> <p>After 48 months, the Project will have ensured:</p> <ul style="list-style-type: none"> <li>• An exit strategy describing key partners and activities in the last year of the project to ensure sustainable result after project end</li> <li>• Market information system set up</li> <li>• Research and development on varieties, processing and feeder roads carried out with Faculty of Agronomy</li> </ul>	<ul style="list-style-type: none"> <li>• Exit strategy document</li> <li>• Partnership strategy document</li> <li>• Mid-Term and Final Project Evaluation</li> <li>• PSR</li> </ul>	<ul style="list-style-type: none"> <li>• Partners willing to collaborate</li> </ul>
<b>ACTIVITIES</b>			
<b>Component I: Empower Farmer Business Groups (PBGs)</b>			
<p><b>1.1 Support farmers to form PBGs</b></p>	<p>In 60 months, the Project will have ensured:</p> <ul style="list-style-type: none"> <li>• At least 15,000 PBG farmers have implemented the appropriate activities package by year 5 in at least 3 regions</li> <li>• At least 25,000 farmers have participated in at least 200 PBG induction workshops (10,000 of which have not yet finalized)</li> </ul>	<ul style="list-style-type: none"> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Number of mango farmers in Haiti exceeds 200,000</li> <li>• Farmers are already living in clusters (not too spread out)</li> <li>• The total number of 25,000 farmers to be reached by the Project will be divided into 2 "waves". There will a first wave of PBGs totaling 15,000 to receive</li> </ul>

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
	<p>program)</p> <p>In 48 months, the Project will have ensured:</p> <ul style="list-style-type: none"> <li>• At least 20,000 PBG farmers are actively participating in the program and have received training in at least 3 regions</li> </ul> <p>In 24 months, the Project will have ensured:</p> <ul style="list-style-type: none"> <li>• At least 5,000 PBG farmers are actively participating in the program and have received training in at least 3 regions</li> </ul> <p>In 12 months, the Project will have ensured:</p> <ul style="list-style-type: none"> <li>• At least 1,000 PBG farmers are actively participating in the program</li> <li>• PBGs established in at least 2 regions</li> </ul> <p>In 6 months, the Project will have:</p> <ul style="list-style-type: none"> <li>• Selected Project areas</li> <li>• Identified at least 3 cooperatives for development of PBGs</li> </ul>		<p>the full package of capacity building outlined above, over 3 years. The remaining 10,000 farmers, the second 'wave', will be engaged from the end of year 3 until the end of year 5 when the Project finishes</p>
<p><b>1.2 Ensure that PBGs are trained on productivity measures and business skills</b></p>	<p>In 60 months, the Project will have ensured:</p> <ul style="list-style-type: none"> <li>• 100% of PBGs have been trained on basic production and productivity practices</li> <li>• At least 300 workshops on productivity measures (pruning, grafting etc) have been carried out</li> <li>• 50% of PBGs undertake actions aimed at women's participation</li> <li>• All PBGs have received gender sensitization training</li> <li>• 90% of PBG meetings at times conducive to women's</li> </ul>	<ul style="list-style-type: none"> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Successful set up and functioning of model of training center with PBG trainers</li> <li>• Role for traceability dependent on role of other players</li> <li>• Engagement of appropriate partner to advise on technical aspects of food security strategy</li> <li>• Woman farmers willing to join PBGs and take management positions</li> </ul>

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
	<p>participation</p> <ul style="list-style-type: none"> <li>• 20% PBGs carry out activities to ensure food security among members</li> </ul> <p>After 48 months, the Project will have:</p> <ul style="list-style-type: none"> <li>• Ensured that 150 workshops on productivity measures have been carried out</li> <li>• At least 150 trainings on business administration have been carried out</li> <li>• 200,000 USD in awards or incentive schemes rewarded to well-performing PBGs (e.g., tools, solar panels, laptops, traceability equipment)</li> </ul> <p>After 24 months, the Project will have:</p> <ul style="list-style-type: none"> <li>• Ensured that 50 workshops on productivity measures have been carried out</li> <li>• At least 50 trainings on business administration have been carried out</li> </ul> <p>In the first 12 months, the Project will ensure that:</p> <ul style="list-style-type: none"> <li>• The Award Scheme for best performing PBGs is designed</li> <li>• Baseline for current total production and revenue per farmer is confirmed</li> <li>• At least one functioning PBG trainers' training center</li> <li>• PBG training program developed</li> <li>• Production and productivity packages crafted in Creole</li> <li>• At least 20 PBG trainers are selected</li> <li>• 10 training pilot training sessions</li> </ul>		

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
	are carried out		
<p><b>1.3 Support PBGs to plant new trees</b></p>	<p>The Project will achieve the following in 60 months</p> <ul style="list-style-type: none"> <li>• 500 lead farmers trained in environmental best practices</li> <li>• 50% of PBGs adopted environmental practices</li> <li>• At least 50,000 new mango trees have been planted by PBG farmers</li> </ul> <p>In the first 24 months, the Project will have ensured :</p> <ul style="list-style-type: none"> <li>• At least 2 nurseries in production</li> <li>• Ways for farmers to access unexploited land for orchards have been identified</li> <li>• 5 pilot training sessions in planting of new trees are carried out</li> <li>• Feasibility study of irrigation systems finalized</li> </ul>	<ul style="list-style-type: none"> <li>• Report on suitable varieties</li> <li>• Record on established nurseries</li> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Varieties suitable for replanting are available</li> <li>• Availability of new land</li> <li>• Willingness to invest in land</li> </ul>
<p><b>1.4 Support access to credit for inputs</b></p>	<p>After 60 months, the Project will have ensured that:</p> <ul style="list-style-type: none"> <li>• 50% PBGs utilize bank accounts</li> <li>• 25% of PBG members utilizing financial services</li> </ul> <p>After 24 months, the Project will have:</p> <ul style="list-style-type: none"> <li>• Identified institutions to provide credit</li> <li>• Partnered with institutions to provide loans to farmers, PBGs and processor</li> <li>• At least 5 financial institutions have been approached for discussions on how to provide finance</li> <li>• Carried out in depth interviews in financial needs with at least 30 farmers in different regions</li> </ul>	<ul style="list-style-type: none"> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Impact evaluation</li> <li>• Partnership strategy to provide access to finance developed in year 2</li> </ul>	<ul style="list-style-type: none"> <li>• Financial institutions are willing to lend to PBGs and other players</li> </ul>

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p><b>1.5 Work with research institutions to identify varieties suited to local microclimates for replanting</b></p>	<p>In 24 months, the Project will ensure that:</p> <ul style="list-style-type: none"> <li>• Suitable varieties have been grafted</li> <li>• Results of grafting have been monitored and evaluated</li> </ul> <p>In the first 6 months, the Project will:</p> <ul style="list-style-type: none"> <li>• Have partnered with research institution to identify varieties for replanting</li> </ul>	<ul style="list-style-type: none"> <li>• Report on suitable varieties</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Varieties suitable for replanting are available</li> <li>• Availability of appropriate research institutions</li> </ul>
<p><b>1.6 Support farmers to set up market service centers (MSCs)</b></p>	<p>The Project will ensure the following in 60 months:</p> <ul style="list-style-type: none"> <li>• At least 3 functioning Market Service Centers (MSC)</li> <li>• All MSCs are well connected with national road network and feeder roads</li> </ul> <p>After 24 months, the Project will have:</p> <ul style="list-style-type: none"> <li>• At least 1 MSCs functioning</li> <li>• Identified and partnered with 2 collection centers to be turned into MSCs</li> <li>• Developed generic MSC business plan to be adopted for specific needs of each MSC</li> </ul>	<ul style="list-style-type: none"> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Impact evaluation</li> <li>• MSC records</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of existing collection centers that can be turned into MSCs</li> <li>• Access to finance of MSCs</li> </ul>
<p><b>1.7 Support relationships between PBGs and local exporters</b></p>	<p>The Project will achieve the following in 60 months:</p> <ul style="list-style-type: none"> <li>• 50% PBGs sell directly to exporters</li> <li>• 75% PBGs sell by weight or quantity (e.g., not by truck)</li> </ul> <p>After 24 months, the Project will ensure that:</p> <ul style="list-style-type: none"> <li>• At least 10 meetings/training sessions on how to improve supply chain have been carried out with PBGs and exporters</li> <li>• Meetings with all exporters have been carried out</li> </ul>	<ul style="list-style-type: none"> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Working/productive relationship can be facilitated between PBGs and exporters</li> </ul>

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p><b>1.8 Design new approaches to post-harvest handling</b></p>	<p>After 24 months, the Project will have:</p> <ul style="list-style-type: none"> <li>• Designed new systems for post-harvest handling</li> <li>• Tested systems with at least 1 PBGs</li> </ul> <p>In the first 6 months, the Project will have ensured:</p> <ul style="list-style-type: none"> <li>• Inventory of existing post-harvest practices</li> <li>• Key problems related to current practices have been identified</li> </ul>	<ul style="list-style-type: none"> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Impact evaluation</li> <li>• Report in existing post-harvest practices</li> </ul>	<ul style="list-style-type: none"> <li>• Willingness to adopt recommended improvements by PBGs</li> </ul>
<p><b>1.9 Explore farm-level value-added pre-processing opportunities</b></p>	<p>After 48 months, the Project will have ensured that:</p> <ul style="list-style-type: none"> <li>• Activities tested with at least 1 MSC</li> <li>• At least 100 farmers trained in pre-processing activities</li> </ul> <p>After 24 months, the Project will have:</p> <ul style="list-style-type: none"> <li>• Identified pre-processing activities suitable for MSCs (local level)</li> </ul>	<ul style="list-style-type: none"> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Impact evaluation</li> <li>• MSC records</li> </ul>	<ul style="list-style-type: none"> <li>• Willingness to adopt recommended pre-processing by PBGs</li> </ul>
<p><b>1.10 Identify crops for diversification</b></p>	<p>After 12 months, the Project will have ensured that:</p> <ul style="list-style-type: none"> <li>• 1-3 crops complementary to mango cultivation have been identified</li> <li>• Market analysis conducted for at least 3 crops</li> <li>• Feasibility studies conducted for 2 crops</li> <li>• Strategies on how to encourage PBG farmers to cultivate additional crops developed</li> </ul>	<ul style="list-style-type: none"> <li>• Report on other crops</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Existence of appropriate complementary crops</li> </ul>
<p><b>1.11 Train farmers to diversify into other activities</b></p>	<p>The Project will aim to achieve the following in 60 months:</p> <ul style="list-style-type: none"> <li>• 30% PBGs are trained on how to cultivate additional crops (type of crops might vary by region)</li> <li>• At least 15% of PBGs promote additional crop</li> </ul>	<ul style="list-style-type: none"> <li>• PBG records</li> <li>• PBG farmer survey</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Farmers willing to cultivate additional crops</li> </ul>

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
	<p>After 24 months, the Project will have ensured that at least 10 PBGs are trained on other activities (at least 10 training sessions).</p>		
<b>Component II: Foster competitive local processing businesses to increase local value addition</b>			
<p><b>2.1 Support establishment of new mango processing factory and identify appropriate institutions to manage it</b></p>	<p>After 60 months, the Project will have:</p> <ul style="list-style-type: none"> <li>• Supported the joint setup of at least one large scale and/or 5 small-scale new mango processing operations (investors and small farmers associations)</li> </ul> <p>After 24 months, the Project will have ensured that:</p> <ul style="list-style-type: none"> <li>• Investment pack for processing opportunities is prepared</li> <li>• Potential investors and entrepreneurs are contacted regarding processing opportunities</li> <li>• Carried out meetings with at least 10 potential investors</li> <li>• Analyzed different investment schemes to ensure small farmers participation</li> </ul> <p>In the first 12 months, the Project will have ensured that:</p> <ul style="list-style-type: none"> <li>• Assessment of future capacity needed is conducted</li> <li>• Potential processors and investors are identified</li> <li>• Local bottler, local traders and other local actors (farmers associations) are approached as entrepreneurial investors</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation of processing plant profitability in year 5</li> <li>• Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of investors willing to invest in processing (depends on availability of varieties that can be processed, price of export rejects compared to other processing markets)</li> </ul>
<p><b>2.2 Explore viability of introduction of new varieties for processing</b></p>	<p>After 12 months, the Project will have:</p> <ul style="list-style-type: none"> <li>• Identified existing or new varieties suitable for processing</li> <li>• Investigated the possibilities of introducing new varieties in Haiti</li> </ul>	<ul style="list-style-type: none"> <li>• Report on varieties</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of varieties that can be processed in Haiti</li> </ul>
<b>Component III: Facilitate supportive enabling environment</b>			

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<b>3.1 Collaborate with partners to prioritize infrastructure projects and address logistical constraints</b>	<p>After 12 months the Project will have ensured that:</p> <ul style="list-style-type: none"> <li>Needs assessment for improvement of national and feeder roads is finalized</li> <li>Partnership strategy for improvement of roads is developed (including identification of appropriate public and private sector partners)</li> <li>Carried out at least 1 meeting/workshop with potential partner(s)</li> </ul>	<ul style="list-style-type: none"> <li>Public data on infrastructure</li> <li>Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Availability of partners</li> </ul>
<b>3.2 Address cost of USDA inspection</b>	<p>In 12 months, the Project will have:</p> <ul style="list-style-type: none"> <li>Investigated possibilities to reduce USDA fees to the mango industry in Haiti</li> <li>Drafted a concept note on how to reduce the cost to the industry</li> <li>Approached relevant individuals to discuss concept</li> </ul>	<ul style="list-style-type: none"> <li>Concept note</li> <li>Meeting records</li> </ul>	<ul style="list-style-type: none"> <li>Willingness to discuss potential solutions from the part of USDA</li> </ul>
<b>3.3 Develop mechanism for fair competition among exporters and support exporters to organize themselves in an effective manner</b>	<p>After 48 months, the Project will have ensured increased active membership in exporter organization</p> <p>After 18 months, the Project will have ensured that:</p> <ul style="list-style-type: none"> <li>Recommendations for exporter organization are developed and discussed with exporters</li> <li>Working group with exporters is created to develop organization</li> <li>At least 2 meetings with exporters' association are carried out</li> </ul>	<ul style="list-style-type: none"> <li>Impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Exporters willing to collaborate on exporter organization</li> </ul>
<b>3.4 Explore availability of new land and work with partners to provide access</b>	<p>After 24 months, the Project will have developed a concept note available on ways for farmers to access unexploited land for orchards.</p>	<ul style="list-style-type: none"> <li>Impact evaluation</li> <li>Concept note</li> </ul>	<ul style="list-style-type: none"> <li>Access to new land is at all viable</li> </ul>
<b>Component IV: Knowledge management and dissemination</b>			
<b>4.1 Revision of strategy approach based market data</b>	<p>Every 6 months, the Project will have carried out a revision of the Project based on market data and impact</p>	<ul style="list-style-type: none"> <li>Strategic documents</li> </ul>	<ul style="list-style-type: none"> <li>Market data available</li> </ul>

SUMMARY OF GOALS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<b>4.2 Case studies</b>	evaluation. After 60 months, the Project will have: <ul style="list-style-type: none"> <li>• Developed at least 5 case studies for dissemination to academic institutions, other donors, etc</li> <li>• Participated in at least 2 events to show Project progress and results</li> </ul>	<ul style="list-style-type: none"> <li>• Case study documents</li> </ul>	<ul style="list-style-type: none"> <li>• Cases suitable for learning available</li> <li>• Interest from universities</li> </ul>
<b>4.3 Develop exit and partnership strategy</b>	After 54 months, the Project will have conducted a sustainability workshop with partners to ensure smooth hand over.  After 48 months, the Project will have developed a strategy for how to hand over to partners after Project end.  After 12 months, the project will have developed a partnership strategy.	<ul style="list-style-type: none"> <li>• Exit and partnership strategy documents</li> </ul>	<ul style="list-style-type: none"> <li>• n/a</li> </ul>
<b>4.4 Develop Impact Evaluation</b>	After 12 months the Project will have: <ul style="list-style-type: none"> <li>• Identified 3<sup>rd</sup> party to carry out Impact Evaluations throughout the project</li> <li>• Designed Impact Evaluation</li> <li>• Carried out first evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Impact Evaluation template</li> <li>• 1<sup>st</sup> Impact Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• 3<sup>rd</sup> party available and willing to work with the Project</li> </ul>

**ANNEX II: DETAILED BUDGET. MANGO AS AN OPPORTUNITY FOR LONG-TERM ECONOMIC GROWTH (HA-M1034)**

	Share time	MIF	Counterpart	TOTAL
<b>Component 1. Empower Farmer Business Groups (FBGs) to increase production and to strengthen market linkages to fresh markets</b>		<b>\$1,996,024</b>	<b>\$1,633,110</b>	<b>\$3,629,134</b>
Project manager	50%	174,606	142,859	317,465
Deputy project manager	50%	175,273	143,405	318,679
Accountant	50%	152,780	125,002	277,782
Corporate partnership advisor	15%	40,294	32,968	73,261
Senior external advisor	57%	79,620	65,144	144,764
Senior TNS agribusiness advisor	72%	5,148	4,212	9,360
Sr BA	78%	357,505	292,504	650,010
BA	100%	327,386	267,861	595,247
Technical advisor	100%	456,659	373,630	830,290
Volcon	90%	41,028	33,568	74,596
Training		15,826	12,948	28,774
Gender activities		12,156	9,946	22,103
Environmental consultant		7,598	6,216	13,814
Food security consultant		7,598	6,216	13,814
Farmer meetings (food, drinks, material)		27,500	22,500	50,000
PBG farmer trainer (2nd wave)		2,200	1,800	4,000
Tools for farmer training		2,846	2,329	5,175
FBG award/ grant		110,000	90,000	200,000
<b>Component 2. Foster competitive local processing businesses to increase local value addition</b>		<b>\$398,824</b>	<b>\$326,311</b>	<b>\$725,135</b>
Project manager	30%	104,764	85,716	190,479
Deputy project manager	25%	87,637	71,703	159,339
Accountant	30%	91,668	75,001	166,669
Corporate partnership advisor	15%	40,294	32,968	73,261
Senior external advisor	4%	5,587	4,571	10,159
Senior TNS agribusiness advisor	14%	1,001	819	1,820
Sr BA	12%	55,001	45,001	100,002
Volcon	10%	4,559	3,730	8,288
Training		5,275	4,316	9,591
Gender activities		3,039	2,487	5,526
<b>Component 3. Ensure enabling environment</b>		<b>\$271,562</b>	<b>\$222,187</b>	<b>\$493,749</b>
Project manager	20%	69,842	57,144	126,986
Deputy project manager	15%	52,582	43,022	95,604
Accountant	20%	61,112	50,001	111,113
Corporate partnership advisor	0%	0	0	0
Senior external advisor	30%	41,905	34,286	76,192
Senior TNS agribusiness adviser	4%	286	234	520
Sr BA	10%	45,834	37,501	83,335
<b>Component 4. Monitoring and evaluation</b>		<b>\$313,498</b>	<b>\$256,498</b>	<b>\$569,996</b>
Impact evaluation		110,000	90,000	200,000
M&E coordination and training (incl.follow up 3 years after project)		203,498	166,498	369,996
<b>Project execution</b>		<b>\$14,935</b>	<b>\$2,170,086</b>	<b>\$2,185,021</b>
Country director	20%	0	234,436	234,436
Office manager/HR	100%	0	158,733	158,733
Office admin	100%	0	95,240	95,240
Deputy project manager	10%	0	63,736	63,736
Senior external advisor	9%	0	22,857	22,857
Senior TNS agribusiness adviser	10%	0	1,300	1,300
Cost of mobilization (incl. indirect costs)		0	133,152	133,152
Driver	100%	0	238,099	238,099
Marketing	30%	0	107,145	107,145
Office rental, setup and running cost (incl. electricity and security)	100%	0	616,011	616,011
Equipment	100%	0	32,162	32,162
Per diems	100%	0	14,316	14,316
Local travel and transport (5 cars, 5 motorcycles, fuel, local hotels etc)	100%	0	370,064	370,064
External audits		14,935	12,219	27,154
International travel	100%	0	70,618	70,618
<b>Total Direct Costs</b>		<b>\$2,994,842</b>	<b>\$4,608,192</b>	<b>\$7,603,034</b>
Knowledge Management MIF (1%)		30,100	0	30,100
Unforeseen		15,000	0	15,000
Impact Evaluation MIF (0.5%)		15,276	0	15,276
<b>GRAND TOTALS</b>		<b>\$3,055,218</b>	<b>\$4,608,192</b>	<b>\$7,663,410</b>

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK  
MULTILATERAL INVESTMENT FUND

PROPOSED RESOLUTION MIF/DE-\_\_\_/10

Haiti. Nonreimbursable Technical Cooperation ATN/ME-\_\_\_\_-HA  
Mango as an Opportunity for Long-term  
Economic Growth

The Donors Committee of the Multilateral Investment Fund

RESOLVES:

1. That the President of the Inter-American Development Bank or such representative as he shall designate is authorized, in the name and on behalf of the Bank, as Administrator of the Multilateral Investment Fund, to enter into such agreements as may be necessary with TechnoServe Inc. (TNS), and to take such additional measures as may be pertinent for the execution of the project proposal contained in document MIF/AT-\_\_\_\_ with respect to technical cooperation for Mango as an Opportunity for Long-term Economic Growth.
2. That up to the amount of US\$3,055,218 or its equivalent in other convertible currencies shall be authorized for the purpose of this resolution, chargeable to the resources of the Multilateral Investment Fund.
3. That the above-mentioned sum is to be provided on a nonreimbursable basis.

(Adopted on \_\_ \_\_\_\_\_ 2010)

LEG/SGO-HA-35177685-10  
HA-M1034