

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

HAITI

RURAL PRODUCTIVITY AND CONNECTIVITY PROGRAM WITH A TERRITORIAL APPROACH

(HA-J0002; HA-G1050)

GRANT PROPOSAL

This document was prepared by the project team consisting of: Geraud Albaret (CSD/RND), Team Leader; Raphaël Dewez (INE/TSP), Alternate Team Leader; Stevens Simplus, Joseph Cedrick, Jean Kensle Figaro (CID/CHA); Juliana Almeida (CSD/CCS); Parnelle Boursiquot, Lina Salazar, Santiago Bucaram Villacis, Lisa Restrepo, Elettra Legovini, Nastasia Keurmeur, Carmine Paolo De Salvo, Bruno Jacquet (CSD/RND); Marise Etienne Salnave, Angel Sanabria (VPC/FMP); Adrien Dewalque (DIS/CDR); Laura Giles Alvarez (CID/CID); Serge-Henri Troch, Raimon Garcia Porta (VPS/ESG); Javier Mosquera Jimenez, Sara Vila Saint-Etienne (LEG/SGO); Judith Anne Morrison, David Cotacachi (SCL/GDI).

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ABBREVIATIONS	
BAC	Communal Agricultural Offices
BRH	<i>Banque de la Republique d'Haiti</i>
CC	Climate Change
DDA	<i>Direction Départementale Agricole</i>
DIA	Direction of Rural Infrastructure
DPAQ	Directorate of Fisheries and Aquaculture
EA	Executing Agency
ELCSA	Latin American and Caribbean Food Security Scale
ESG	Environmental, Social and Corporate Governance
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Management Report
EU	Executing Unit
FAD	Fish Aggregating Device
GAFSP	Global Agriculture and Food Security Program
GDO	General Development Objective
GDP	Gross Domestic Product
HIMO	High Intensity Manual Labor
IDB	Inter-American Development Bank
IE	Impact Evaluation
INDC	Intended National Determined Contribution
IPC	Integrated Food Security Phase Classification
LAC	Latin America and the Caribbean region
MARNDR	Ministry of Agriculture
MT	Metric tons
MTPTC	Ministry of Public Works, Transport and Communications
NAIP	National Agriculture Investment Plan
NPV	Net Present Value
PDPA	Artisanal Fisheries Development Program
PITAG	Agricultural and Agroforestry Technological Innovation Program
POM	Program Operating Manual
PPP	Purchasing power parity
PREPOC	Post-COVID-19 Economic Relaunch Plan
PSNSSANH	National Strategy on Nutrition and Food Sovereignty and Security
PTTA	Technology Transfer to Small Farmers Program
RAI	Rural Access Index
RCT	Randomized Controlled Trial
RGA	General Agricultural Census
TFP	Total Factor Productivity
UNOPS	United Nations Office for Project Services
UPMP	Procurement Unit of MARNDR
USAI	Unité de Statistique Agricole et Informatique

PROJECT SUMMARY
HAITI

RURAL PRODUCTIVITY AND CONNECTIVITY PROGRAM WITH A TERRITORIAL APPROACH
(HA-J0002; HA-G1050)

Financial Terms and Conditions				
Beneficiary: Republic of Haiti			Amortization Period:	N/A
Executing Agency: Ministry of Agriculture, Natural Resources and Rural Development (MARNDR)			Disbursement Period:	5 years
			Grace Period:	N/A
Source	Amount (US\$)	%	Interest rate:	N/A
IDB Grant Facility (HA-J0002):	60,000,000	77	Credit Fee:	N/A
IDB GAFSP^(a) Co-financing (HA-G1050):	18,300,000	23	Inspection and supervision fee:	N/A
Total:	78,300,000	100	Currency of Approval:	Dollars of the United States of America
Project at a Glance				
Project Objective/Description: The general objective of this operation is to improve the food security of rural households, including farmers, fishers, seafood merchants and rural workers in the target departments. The specific objectives are: (i) to improve food availability by improving productivity through the adoption of climate resilient agricultural technologies and rural infrastructures; and (ii) to improve food access by increasing revenues.				
Special Contractual Conditions prior to the first disbursement of the financing: The Beneficiary, through the Executing Agency, will provide evidence to the satisfaction of the Bank of: (i) the official designation of the key personnel of the Project Execution Unit (PEU), including at least the coordinators of the three technical directorates and a Monitoring and Evaluation (M&E) specialist to ensure adequate execution of the program; (ii) the approval and entry into effect of the Program Operating Manual (POM) according to the terms and conditions previously agreed with the Bank (¶3.4). See additional Special Contractual Conditions in Annex B of the Environmental and Social Management Report (ESMR) (REL#3) and in Annex III, Section II.				
Special Contractual Conditions prior to the execution of Component 3: In addition to the conditions prior to first disbursement, the Beneficiary, through the Executing Agency, will provide evidence to the satisfaction of the Bank of: (i) the signature by the MARNDR and the Ministry of Public Works, Transport and Communications (MTPTC) of a collaboration agreement (OEL#17) for the monitoring and supervision of rehabilitation works; and (ii) the draft contract to be signed with United Nations Office for Project Services (UNOPS) (OEL#22) (¶3.5).				
Exceptions to Bank Policies: None.				
Strategic Alignment				
Challenges^(b):	SI <input checked="" type="checkbox"/>		PI <input checked="" type="checkbox"/>	EI <input type="checkbox"/>
Cross-Cutting Issues^(c):	GE <input checked="" type="checkbox"/>	and	DI <input type="checkbox"/>	CC <input checked="" type="checkbox"/>
			and	ES <input checked="" type="checkbox"/>
				IC <input type="checkbox"/>

^(a) This operation will be co-financed with resources from the Global Agriculture and Food Security Program (GAFSP). The availability of said resources will be subject to the approval from the GAFSP Steering Committee of the pertinent project.

^(b) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

^(c) GE (Gender Equality) and DI (Diversity); CC (Climate Change) and ES (Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. PROJECT DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, and justification

- 1.1 **Haiti is grappling with the consequences of increasing fragility and governance challenges, which hinder the progress of socio-economic indicators.** Haiti is a country in a fragile¹ situation, characterized by low-income levels, socio-economic challenges, and political upheaval. Haiti is ranked 13th out of 178 countries on the [Fragile States Index](#). This situation affects all aspects of Haiti's affairs, including national security, governance,² and socioeconomic performance. Almost 60% of the Haitian population live below the national poverty line, and 24.5% live on less than US\$1.90 a day compared to 4.7% in Latin America and the Caribbean (LAC) region (PPP, 2011). Haiti's fragility has increased since 2018 due to frequent protests that resulted in a series of country-wide lockdowns where schools, courts, businesses, and public services shut down for several weeks. Since then, the political divide has been increasing. The deteriorating political environment, coupled with relentless social unrest and insecurity, is taking the toll on service delivery, quality of life and the economy. This situation has worsened with the COVID-19 outbreak,³ the constitutional instability since July 2021 and the 2021 earthquake.⁴ As a result, the country recorded an economic contraction of 0.7% in FY2021. This is the third consecutive year the country has registered an economic contraction. The pandemic also hindered the government's economic stance, partly offset by lower international oil prices, which led to a wider fiscal deficit in FY2020 (3% of GDP) and has contributed to the 2.7% of GDP deficit recorded in FY2021.
- 1.2 **Food insecurity** is a multidimensional challenge composed of [four dimensions: availability, access, stability and utilization](#). Haiti scores low on all four dimensions which translates into high levels of food insecurity. Regarding food availability, Haiti is the only LAC country with less than 100% food supply adequacy (91%) (FAOSTAT, 2018). For food access, Haiti's income per capita of US\$2,905 is considerably below the LAC region (US\$16,000) (WDI, 2019), which translates into household's low purchasing power to obtain food. Regarding food stability, the average cereal import dependency ratio in Haiti for the period from 2016-2018 was 60% compared to -6% in LAC. Finally, regarding food utilization undernourishment affects 46% of Haiti's population compared to 7.7% in the LAC region (FAOSTAT, 2018). [Most of the food-insecure households worldwide are rural households](#) who depend on subsistence agriculture. In Haiti, where 43% of people live in rural areas, even subsistence livelihoods are threatened by the current socioeconomic context: supply of goods and services does not meet demand because of insecurity, damaged roads and limited access to markets, and low levels of farm and fishers' productivity, among others (WFP, 2020). In these settings, small-scale farmers and fishing communities are among those most

¹ "A period of time when socio-economic development requires emphasis on peacebuilding and state building activities such as inclusive political settlements, security, justice, jobs, good management of resources, and accountable and fair service delivery." (Fragility Spectrum, 2013).

² (13.5/100) (Worldwide Governance Index).

³ The country has reached 20,326 cases and 563 deaths in July 2021.

⁴ Resulting in 2,200 dead, thousands of injured and over .5 million families needing assistance (USAID, 2021).

affected by food insecurity. Haiti recorded the highest rate of food insecurity in the region before the COVID-19 crisis (IFPRI, 2019). The pandemic has further complicated the food security challenges that rural communities were already facing. Between March and June 2021, the Integrated Food Security Phase Classification (IPC, 2021) estimated that 46% of the population was facing high acute food insecurity and required urgent action to overcome hunger. This includes 1.1 million people classified in food emergency (IPC Phase 4) and 3.2 million people classified in food crisis (IPC Phase 3).

- 1.3 **The agricultural sector in Haiti.** In FY2019, the agricultural sector accounted for 17% of Haiti's GDP (BRH, 2020). From 2015 to 2019, Haiti exported an average of US\$26 million per year in agricultural products (FAOSTAT, 2021), representing about 2% of total exports (WDI, 2021). Agriculture accounts for 29% of total employment, 66% of employment in rural areas and 75% of employment in low-income households (World Bank, 2017). According to an estimate by the Ministry of Agriculture (MARNDR, 2021), agriculture is practiced in more than 1 million farms in Haiti with an average size of approximately 0.5 ha (World Bank, 2017). Total public support to the agricultural sector represented, on average, 5.3% of GDP in the period 2006-2012, but only 3.2% of the resources are allocated to public goods (the lowest level in Latin America and the Caribbean (LAC) (Agrimonitor, 2012).
- 1.4 **The fishery sector in Haiti.** Haiti's fishing sector, which is exclusively artisanal, represents 2.5% of the national GDP (FAO, 2017). According to the National Census of Artisanal Fisheries (USAI, 2018-2021), financed by the Bank, there are approximately 46,000 fishermen in Haiti, distributed in nearly 600 fish landing ports. Also, 60,000 people's livelihoods depend on seafood processing and marketing operations (IRD, 2020). About 20% of fishers belong to a fishing association, whether formal (79% of them have legal recognition) or informal. Fishing represents an important source of income for many households in coastal areas. In the South department, for example, Schill (2021) estimates that fishing is the main income-generating activity of the population living in coastal municipalities (32% cite fishing as the main source of income), followed by agriculture (24%) and livestock (21%). Despite the relative importance of fisheries in the coastal areas, Haiti has an average consumption of fish of 5.8 kg/per person/year (FAOSTAT, 2015), one of the lowest levels in the Caribbean.
- 1.5 **Low agricultural and fishery productivity exacerbates food insecurity through low food availability.** Agricultural productivity in Haiti has stagnated over the past decades (USDA, 2016).⁵ Total factor productivity (TFP) growth has decreased from 3.2% over the 2001-2011 decade to 2% over the 2012-2016 period (Nin-Pratt et al., 2020). The growth rate of agricultural production has been respectively -5% in 2018 and 2% in 2019 (FAOSTAT, 2021). Regarding fisheries, national production contributes only between 36% and 43.5% of domestic consumption (IRD, 2020).⁶ In 2019 the sector's annual production (landing equivalent) was estimated at 17,900 MT of fish, representing a limited increase from 2011 (FAO, 2021). There are many factors that affect agricultural and fishery

⁵ Between 2013 and 2019, annual output per worker in Haiti fell 12% (World Bank, 2021a), output per hectare dropped 11% (FAOSTAT, 2021).

⁶ In 2015, the value of imports of fish products was US\$45M and exports around US\$9M (FAO, 2017).

productivity in Haiti including low access to technologies and inputs of production, low access to credit and insurance, low access to markets, climate risks, watershed degradation, low levels of investment in public goods including research and productive infrastructures, among others. The negative impacts of these factors are exacerbated if a territorial approach⁷ is [missing in rural development investments](#) planning. Given the above, this operation aims to address the following challenges:

- a. **Low access to technologies and limited technical assistance.** Most agricultural producers in Haiti engage in subsistence farming using basic farming techniques. They lack either the knowledge of, or access to improved inputs and technologies such as certified seeds, appropriate soil conservation methods, and production inputs; many fall short of basic tools and equipment as well. The last General Agricultural Census (RGA) in 2009 showed that only 7% of the farmers used mechanical equipment. Additionally, the baseline data collected for Technology Transfer to Small Farmers Program (PTTA, 2562/GR-HA) show that only 9% of the farmers used improved seeds and fertilizers, and only 22% have knowledge of certified seeds (Fahsbender et al., 2017). It is estimated that the adoption of agricultural technologies and technical assistance could raise farm income in Haiti from US\$347/farm/year (Fahsbender et al., 2017) to US\$1,045/farm/year⁸. Also, it is estimated that adopting agroforestry technologies in Haiti could increase crop yields by 38% and profits by more than 50% ([IDB, 2018](#)). The recognized market failures that represent obstacles to technology adoption in developing countries, are: (i) liquidity constraints and limited access to credit; and (ii) lack of access to information and/or information asymmetries. Liquidity constraints are explained by the lack of agricultural credit, particularly in rural areas, where financial markets are thin or non-existent. Sales of agricultural harvest generate limited liquidity, as shown by the [evaluation](#) of PTTA. As for the information asymmetries, they limit technology adoption not only because agricultural producers lack knowledge and technical assistance on the effective use of these technologies, but also because they lack information regarding location of private providers or costs of production (Bentley et al., 2011).

According to the 2020 fishery census, the main constraints faced by fishers are: lack of fishing equipment and gear (74%), insufficient technical assistance (53%), and limited access to conservation technologies (41%) (USAI, 2021). Fishers use some fishing techniques⁹, all considered “artisanal”; only a minority use the more sophisticated fish aggregating devices (FADs). The use of FADs is limited to about 15% of the fishing community countrywide (USAI, 2021). This is because FADs require specialized equipment and skills to manage the devices correctly and to ensure the safety of users. It is estimated that, if fishers adopted offshore

⁷ It is generally characterized by the interventions intended for the development of a territory through the simultaneous development of multiple sectors and implemented by multiple stakeholders and different levels of governance (IFAD, 2015).

⁸ As estimated in [OEL#1](#).

⁹ Approximately 50% practice angling, followed by net fishing and fish traps (USAI, 2021).

fishing technologies, their productivity could rise from US\$2,699/boat/year to US\$23,761/boat/year¹⁰.

- b. **Lack of public investments in rural infrastructure**, in particular rural roads and fisheries public infrastructures. Low access to markets is one of the most important factors limiting agricultural and fisheries productivity in rural Haiti. The Rural Access Index (RAI), which measures the proportion of the rural population that has access to an all-season road within 2km of their residence, indicates that only 28% of the rural population has access to quality roads, which corresponds to the lowest value in LAC. In fact, it is estimated that farmers can spend more than 50% of their income on transportation costs (Legovini, 2019). This issue not only limits the sale of agricultural products in markets,¹¹ but also restricts access to inputs and technologies.

The lack of productive infrastructure also affects the fishing sector, severely limiting the supply chain. Indeed, the fishery supply chain is severely impaired by post-harvest losses and value loss (IRD, 2020).

- c. **Climate risks**. According to the 2021 [Germanwatch Global Climate Change Risk Index](#), between 2000 and 2019, Haiti was among the top three countries worldwide worst affected by the impacts of extreme weather events and continues to rank high on this list (Germanwatch, 2021). Hydrometeorological events (hurricanes, storms, rains) destroy the country's crops and rural infrastructures, and limit access to markets. In 2018, agricultural losses were estimated at US\$580 million, primarily due to floods and winds caused by hurricane Matthew (2016). Climate models for Haiti predict temperatures to increase up to 2.3°C by 2060, precipitation to decrease up to 20% in the mid-2030s, and frequency and intensity of extreme weather events to increase. This implies important challenges for the agricultural sector regarding climate change adaptation. More frequent and more intense storms and rainfalls could harm Haiti's food supply, as erosion and poor soil health lead to decreased livestock and crop productivity and cause important yield losses if current agricultural and natural resources management conditions [remain unchanged](#). This could contribute to both malnutrition and increased dependence on imports to meet food security needs.

In addition, fish stocks are expected to decline because of climate impact such as changes to ocean temperature, salinity, and turbidity especially in coastal areas. Furthermore, fisheries infrastructures (public markets and docks), fishermen's equipment, and fishers themselves are highly vulnerable to extreme events and sea-level rise. For instance, in previous extreme climate events in Haiti, fishers have been affected by loss of FADs and vessels.

- 1.6 **Gender**. Poverty and fragility impact women disproportionately: 62% of female-headed households, compared with 54% of male-headed households, fall

¹⁰ As estimated in [OEL#1](#).

¹¹ The share of agricultural production sold on the market is as low as 20% (Rambao, 2019).

below the poverty line in Haiti (IMF, 2020). Women are underrepresented in the agricultural and fishery sectors. In 2017, 34% of female employment was in agriculture, as opposed to 63% for men (World Bank Gender Statistics, 2019). Also, the fishery census found that only 1% of fishers are women (USAI, 2021). Women oversee only part of the production processes in agriculture and are mostly in charge of post-production in both sectors. Women farmers sell smaller shares of their production than men in the market and at lower prices (Coello, 2021). Women's participation is limited due to several constraints. Women split their time between economic activities and domestic work, which includes household chores and child rearing. Other barriers include insufficient access to credit and technology (USAID, 2020b). The relative absence of women in these productive sectors affects food security by reducing food availability and access. FAO (2010) has estimated that "if women had the same access to productive resources as men, they could increase yields on their farms by 20-30%." Also, it is well-established that by increasing rural women's control over productive resources, management, and income, would result in greater women's empowerment, which in turn improves household nutrition, dietary diversity, and food access, therefore improving overall food security (Anderson et al., 2019).

1.7 **Empirical Evidence.** The proposed interventions were designed based on a large body of empirical evidence:

- a. **Strengthening annual and permanent food production systems in fragile contexts improves food security.** This program tackles the issue of food system fragility by combining annual production systems (i.e. rice, corn, beans), while promoting the adoption of permanent production systems that uphold production and consumption in the long run (i.e., agroforestry systems). The integration of both production systems is important to palliate the state of emergency of Haiti today, while providing a launchpad for sustainable livelihoods and productive cycles. International experience shows that in fragile contexts, characterized by high vulnerability of food systems, it is pivotal to implement interventions across the entire food system. Hence, interventions aiming to improve food security in fragile countries must consider a synergic approach targeting both annual and permanent crops (GLOPAN, 2020).
- b. **Improved agricultural and fishery productivity through technology adoption and technical assistance enhances food availability and access.** This program promotes the adoption of technical packages through financial incentives and technical assistance, which combined boost productivity, as a steppingstone to increased food availability, access, and overall food security. Empirical evidence generated through rigorous evaluations of operations in the region demonstrates this path. In Bolivia, the impact evaluation of the Direct Support Program for the Creation of Agrifood Initiatives Rural (CRIAR) shows that improving access to technologies, by addressing financial constraints, increases households' probability of being food-secure (32%). Specifically, beneficiaries are less likely to lack food for an entire day (10%), skipping a meal (14%), and having poor dietary diversity (17%). These improvements are explained by increases in access to food – as household income increased 36% – and by increases in food availability – as productivity increased 92% (Salazar et al., 2015).

In fisheries, an evaluation (Duchier, 2021) of the matching grant mechanism of the Artisanal Fisheries Development Program in Haiti - PDPA (3492/GR-HA) confirms that access to training and equipment can increase the food security of beneficiaries in fishing communities. Over 80% of respondents increased catches since the acquisition of the equipment, while 70% perceived reduced losses due to storage equipment. Moreover, the women participating in the evaluation had increased fish sales at the marketplace, translating to higher revenues. In general, 90% of respondents felt more food secure.

- c. **Adoption of climate smart technologies for agriculture and fisheries enhances resilience to climate, food availability and access to food.** The IDB has financed [over 20 operations](#) for the adoption of environmentally and/or climate-friendly technologies through the provision of incentives thus building ample empirical evidence on the effectiveness of these interventions. The combination of financial incentives and technical assistance has proven to encourage producers to transition to more sustainable practices and to temporarily relax liquidity constraints. In Haiti, the [impact evaluation](#) of the agroforestry packages of PTTA has shown that the program has a positive impact on the total value of production (38% higher) and on income from the sale of harvest (58% higher). These results are aligned with the literature: the authors¹² found that in El Salvador, Bolivia, Nicaragua and Honduras soil conservation practices and agroforestry systems have a strong positive impact on farmers' incomes, which in turn reflects immediately in greater capacity to acquire food. Finally, Agroforestry systems play a significant role in the adaptation to climate change through the increase of soil fertility, reducing soil erosion and droughts. It also contributes to mitigation by reducing carbon emissions and increasing sequestration (Dainese et al., 2019). Drip irrigation is also an adaptative measure aimed to foster water saving by improving the efficiency of water use and irrigation (West and Kovacs, 2017), particularly relevant in the context of droughts.

Regarding fisheries, empirical evidence shows that redirecting artisanal fisheries towards offshore fishing allows to reduce the pressure caused by the overexploitation and climate change (CC) on coastal ecosystems (IRD, 2019a).

- d. **Improved rural infrastructures enhances food availability and access.** Investments in transport infrastructure in rural areas play a fundamental role in poverty reduction. In terms of agricultural productivity rural roads [improve market access and lower transaction costs](#). There's a large body of evidence showing that improvements in rural road access lead to higher rural incomes which in turn improve food access and food security (Van de Walle et al., 2011), in particular through lower freight and transport prices (Lebo and Schelling, 2001), higher employment (Rand, 2011), higher agricultural production (Tong et al., 2013), and better access to agricultural markets where farmers can obtain inputs at lower prices (Lebo and Schelling, 2001)

¹² Bravo-Ureta et al. (2006a, 2006b, 2010); González & Le Pommellec, 2019); De Los Santos-Montero & Bravo-Ureta, 2017.

and sell their output at higher prices (Bell et al., 2012). By facilitating farmers' access to higher quality inputs (Okobi and Barungi, 2012) and services (Nkonya et al., 2011), rehabilitated rural roads can also increase the probability that farmers will adopt agricultural technologies that improve agricultural productivity (Starkey and Hine, 2014), which improves food availability.

Similarly, in the fishing sector there are several ways in which improved infrastructure can positively impact food security. Poor onboard handling practices and inadequate infrastructure facilities (for example, landing sites), result in post-harvest losses up to 40%. This jeopardizes the quality and quantity of the fish caught, resulting in significant economic losses (FAO, 2012). On the other hand, food security objectives can only be fully attained if artisanal fisheries are concomitantly shielded against climate-related risks and resilience is improved through by securing on-land infrastructure (IRD, 2019b).

- 1.8 **Lessons learned.** The operation considers the experiences of Bank-financed projects in Haiti that have supported: (i) the adoption of technologies (agriculture and fishery) that promote environmental sustainability and CC resilience; (ii) the rehabilitation of roads and rural infrastructures. Finally, technical options and execution modalities consider the Bank's experience in project implementation in a context of fragility. All lessons are presented in (OEL#8) with main lessons summarized in Table 1.

Table 1. Incorporation of Lessons Learned

Lesson Learned	How it shaped the design
Support to farmers and fishers	
1. Technical Packages for farmers. Liquidity constraints and information asymmetries limit technology adoption that improve agricultural productivity and income. (PTTA, 2562/GR-HA, 40M USD; PDPA, 3492/GR-HA, 15M USD; PITAG, 4359/GR-HA, 76.8M USD).	The program finances the adoption of productive technologies through a menu of technological packages for: (i) annual and permanent crops; (ii) productive technologies; and (iii) post-harvest technologies. The program provides information on the available inputs so that farmers can identify and adopt the technologies best suited to their farming systems, enabling them to become more productive, profitable, and more responsive to changing market and climate conditions.
2. Matching Grant Mechanism for fishers. Matching grant schemes are innovative systems to provide fishers' associations with technologies, while empowering them, ensuring ownership and protecting natural resources. (PDPA)	The program will finance 70%-90% of a business plan presented by the associations to acquire fishing and conservation equipment. In exchange, the associations will commit to maintenance of investments, protect marine resources, and participate in mandatory training sessions.
4. Technical assistance. Technical assistance (TA) is essential to ensure technology adoption, so these services must be offered in a timely manner. (PTTA, PDPA and PITAG).	Agricultural and fishery technological packages will be paired with TA. The agricultural TA strategy includes: (i) strengthening the TA provided by the MARNDR and field providers with training and technicians; (ii) institutional and technical reinforcement of the Communal Agricultural Offices (BAC); and (iii) establishment of demonstration plots. The fishery TA will focus on sustainable fishing techniques to preserve biodiversity and: (i) associations' organizational strengthening; (ii) involving the PDPA associations to onboard and mentor the new beneficiary associations; (iii) equipment maintenance training; and (iv) technical strengthening of the Ministry for the management of marine resources and of fishery data.

Lesson Learned	How it shaped the design
Rural infrastructures	
5. Quality of design prior to contracting. Having executive designs prior to contracting the civil works, to mitigate cost variations in the project's budget, bidding price, and final cost of the works is key (SHTS III, 3085/GR-HA, 50M USD; SHTS IV, 3190/GR-HA, 50M USD; SHTS V, 3570/GR-HA, 65M USD and TADC, 4618/GR-HA, 225M USD).	For rural roads interventions, the design studies have already been elaborated by UNOPS as part of a road prioritization study (OEL#6).
6. Supervision. Effective and multi-layer supervision is needed to ensure that the works are performed according to plan (SHTS III; SHTS IV; SHTS V, and TADC).	In addition to the internal supervision of UNOPS and of the MARNDR/MTPTC team, an external supervision firm will be hired to validate the technical progress of the works and to ensure the institutional reinforcement of the MARNDR teams.
7. Maintenance. Maintenance activities are limited by public financial availability after project completion.	To compensate for the deficit of road maintenance, the operation relies on (i) more sustainable rehabilitation works to protect the road's surface layer; (ii) training and the supply of tools for departmental directorates of MARNDR and local maintenance brigades who will oversee the maintenance after the works are completed.
Execution in a fragile context	
8. Readiness and agility: In fragile contexts, operations must propose agile implementation measures from design to execution.	A readiness plan (OEL#19) is prepared to ensure the successful launch and implementation of the project at all phases of the project cycle. Based on an analysis of MARNDR's project execution challenges and successes, it includes, amongst other, recommendations on: (i) procurement processes to be launched before operation eligibility; (ii) fiduciary implementation modalities to ensure disbursements; (iii) manuals of procedures for each incentive mechanism; (iv) execution modalities for each component at the national and local level; and (v) grievance mechanisms and evaluation of the quality of the services rendered. This plan is dynamic and will be followed throughout the project.
9. Transparency in selection of beneficiaries. Incentive systems to producers must be transparent and have clear eligibility and selection criteria, as well as mechanisms for independent third-party monitoring during implementation, to ensure transparency and execution effectiveness. (PTTA, PDPA and PITAG).	Agriculture: Farmers interested to participate in the Program will have to register and will be asked to state their package preference. Eligible beneficiaries will have a plot of at least 0.25ha that is compatible with the technologies demanded. In communities where the demand for the packages exceeds supply, the MARNDR will conduct public lotteries. Fisheries: Eligible associations were rated and selected based on scores given on several criteria: years of existence, formal registration and other organizational and operational characteristics. Rural roads: HIMO workers will be selected via a lottery (one person per household) at the community level. Transparent communication on the selection process will be provided.
10. Strengthening and decentralization of the EU's execution capacities. Successful program implementation is ensured by the decentralization of MARNDR teams close to beneficiary communities. (PTTA, PDPA and PITAG).	The current decentralized implementation scheme is maintained and strengthened in the new program by adding local financial teams to facilitate the processing of supporting documents.

- 1.9 **Conceptual approach and complementarity.** The agriculture, fisheries and rural infrastructure activities proposed in the program will contribute to the food security of the rural beneficiaries through measures that will increase productivity and

income while promoting the sustainable management of the resources on which they depend. The proposed interventions are based on lessons learned in Haiti and incorporate technical and implementation innovations¹³ to achieve the set objectives in the current context of fragility in order to have the greatest additionality, both in terms of relevance (food security status) and effectiveness (Ministry's existing capacity to execute). The implementation strategy is based on a holistic approach to rural productivity: support to annual and permanent food production systems in all production cycles and post-harvest while improving access to markets. Production and market connections combined will create a virtuous cycle of continuous and profitable resource use, sustainably tackling food security. Thus, this approach will respond to the dual objective of availing immediate relief to food insecurity and strengthening sustainability of production systems. Furthermore, through its territorial approach, the program complements the following Bank operations (i) the Agricultural and Agroforestry Technological Innovation Program – PITAG (4359/GR-HA) by scaling up interventions in the targeted departments to reach more beneficiaries with improved technological packages; (ii) the Artisanal Fisheries Development Program - PDPA (3492/GR-HA) by ensuring continued support to the fisheries sector and targeting more beneficiaries; and (iii) the Transport and Departmental Connectivity Program (4618/GR-HA) focusing on improving national and departmental roads in the targeted departments. Also, since the agricultural production areas are within the scope of the safety nets for vulnerable people affected by the coronavirus programs (5068/GR-HA) and (5288/GR-HA) as well as the education program (5279/GR-HA), it contributes to the objectives of: (i) making locally produced food available on markets more accessible to vulnerable populations in the North and Northeast and (ii) facilitating the connections between farmers and the school feeding operators that acquire products for school canteens. Finally, collaboration with IDB Lab interventions such as the sorghum, cocoa and coffee value chains (ATN/ME-15024-HA, ATN/ME-14077-HA SP/OC-15-11-HA) may facilitate the integration of farmers and fishers to suitable value-chains by sharing knowledge about digital tools developed.

- 1.10 **Strategic alignment.** This operation is included in the Update of the Operation Program Report (GN-3034-2) and is aligned with the IDB's Second Update to the Institutional Strategy (AB-3190-2) and is expected to contribute to the Corporate Results Framework 2020-2023 (GN-2727-12) through the priorities of: (i) Social Inclusion and Equality, as poor small-scale farmers and fishers in a situation of economic and food insecurity are the main beneficiaries; and (ii) Productivity and Innovation, through: (i) the generation of sustainable agricultural technologies; (ii) improved access to those technologies with technical assistance for all beneficiaries; and (iii) fostered productive innovation. It also aligns to the cross-cutting issues of: (i) Gender Equality and Diversity, generating more participation from women; and (ii) Climate Change and Environmental Sustainability, by reducing vulnerability of farmers to climate impacts. According to the [joint MDB approach on climate finance tracking](#), 13.86% of total IDB funding for this operation result in climate finance adaptation due to the support to agroforestry and drip irrigation equipment (adaptation-related technologies) and resilient measures for the dock construction. This contributes to the IDB's climate

¹³ Fishing equipment, improved seeds, technical itineraries (associations of short and long cycle species), matching grant and incentive mechanisms.

finance goal of 30% of annual approvals. The operation is aligned with the Bank's Strategy with Haiti 2017-2021 (GN-2904), for its contribution to the first priority area "Improve the business climate to enhance productivity", in particular in addressing the challenge of "inefficient production techniques and lack of access to inputs and quality services for producers", and "lack of infrastructure services of good quality", and the goal of "Resilience to climate change", and "Gender equality". The operation is consistent with the Update of the Gender Action Plan for Operations 2020-2021 [GN-2531-19, paragraph 3.7 (v)]. Finally, this operation is aligned with the Vision 2025 Reinvest in the Americas: A Decade of Opportunity (GN-3025-5) for its contribution to Tier 1 "Work towards sustainable and inclusive economic growth" and Tier 2 "Identify a Pathway to accelerate the recovery."

- 1.11 **Consistency with national priorities.** The program is consistent with the 2010-2025 Agriculture Policy Document, the 2016-2021 National Agriculture Investment Plan (NAIP), and Haiti's Intended National Determined Contribution (INDC, 2015). These documents envision building up a modern agricultural sector based on the efficiency and effectiveness of family agriculture and agribusiness. It is aligned with The Post-COVID-19 Economic Relaunch Plan (PREPOC) 2020-2023 priorities: (i) import substitution of agricultural goods; and (ii) increase food security. Additionally, the program is fully aligned with the sectoral actions of Haiti's National Strategy on Nutrition and Food Sovereignty and Security (PSNSSANH): (i) investment in smallholder farm production and trade in local products; and (ii) the rehabilitation of rural infrastructure. Finally, the program is consistent with the Post Disaster Needs Assessment (PDNA) following the 2021 earthquake by contributing to the short and medium-term recovery objectives: (i) strengthening market access; and (ii) strengthening access to post harvest technologies.

B. Objective, components, and cost

- 1.12 **Objective.** The general objective of this operation is to improve the food security of rural households, including farmers, fishers, seafood merchants and rural workers in the target departments. The specific objectives are: (i) to improve food availability by improving productivity through the adoption of climate resilient technologies and rural infrastructures; and (ii) to improve food access by increasing revenues. To achieve these objectives, the program will be structured in four components.¹⁴
- 1.13 **Component 1: Support to farmers productivity (HA-J0002: US\$19,322,495; HA-G1050: US\$17,572,417).** This component promotes farmers adoption of agricultural technologies through technological packages and technical assistance. Technology adoption will improve food availability through increased production, and food access through higher agricultural revenues.
- 1.14 **Technological packages (TP):** A technology menu has been developed ([OEL#2](#) and [OEL#3](#)) based on food security relevance, their climate adaptation potential, and the environmental sustainability of different crops. This menu is

¹⁴ Indirectly, the program addresses food stability by promoting climate change adaptation technologies that smooth home consumption and income. Also indirectly, it tackles food utilization by promoting adoption of biofortified crops as well as promoting more diversified production systems through agroforestry.

flexible and may be adapted to suit evolving needs. It includes technologies that can be applied to both annual and permanent crops and comprises technologies for production phases both in the farming cycle and post-harvest. Although distribution will be demand-based, most of the production packages will have a strong focus on agroforestry systems.¹⁵ However, in response to the COVID-19 crisis, the program, through the GAFSP, will also finance technological packages for annual crops. These will focus on staple crops with improved seeds (maize, rice, and beans) and high-value crops and will come with a strong nutrition focus: they will prioritize crop varieties rich in micronutrients and will improve beneficiaries' nutritional knowledge and practices. Post-harvest packages will tackle storage, packaging, or processing activities, especially for cereals, roots and tubers. Also, irrigation technologies will be part of the technological menu. Due to the fragile context, 100% of the cost of the incentives will be covered by the program except for the post-harvest and irrigation equipment that will request a 10-15% matching contribution by the recipients, except for women recipients, who will benefit from a discount depending on the technology. The value of the technological package will average US\$2,000, with a maximum amount of US\$3,700.

- 1.15 **Technical Assistance (TA).** The program will finance a strong technical assistance strategy with a fourfold approach: (i) technical assistance for beneficiary farmers with a gender approach (technical assistance on production, maintenance, transformation and commercialization);¹⁶ (ii) training for MARNDR agricultural technicians at central and local level, and for technology providers; (iii) strong supervision of technical assistance by MARNDR; and (iv) demonstration plots to transfer knowledge to beneficiary and non-beneficiary farmers, creating spillover effects.
- 1.16 This component includes specific actions to ensure women and youth participation: (i) the registry for agricultural incentives will open two weeks earlier to give preferential access to women and youth beneficiaries; (ii) specific packages targeted to women's activities are included in the technology menu with a reduction in the co-financing requirement (iii) technical assistance with a gender approach;¹⁷ (iv) the participation of women will be maintained at PITAG's level of 46% of all beneficiaries; and (v) women will be part of the decision-making process when local leaders are mobilized.
- 1.17 **Component 2: Support to fishers productivity (HA-J0002: US\$6,813,620).** This component aims to increase the adoption of sustainable practices that will improve fishers' food security through improved productivity while ensuring the sustainability of marine resources. The component will target approximately 65 fisher and merchant associations through: (i) co-financing mechanism to support access to new technologies; and (ii) organizational and technical strengthening, via technical assistance ([OEL#5](#)).

¹⁵ Specific resources will target the inclusion of agroforestry techniques in the cacao, coffee, fruit value chains, etc., which is expected to contribute to the reduction of their climate vulnerability.

¹⁶ Including Farmer [Field Schools \(FFS\)](#) and [Farmer Business School \(FBS\)](#). This model has been developed and will be implemented with the support of the FAO.

¹⁷ TA considering issues related to language, schedules, and areas for childcare.

- 1.18 **Matching-grants mechanism.** Through this mechanism the associations will be able to acquire FADs, boats, engines, fish conservation and processing equipment. Matching grants will finance 70-90% of a business plan developed by the associations while the remaining cost will be paid by the associations. Only safety equipment will be fully covered by the program. The partner associations will make a formal commitment to: (i) avoid fishing protected species; (ii) avoid using non-selective fishing gear; (iii) follow the norms for minimum catch sizes; and (iv) share data on fishing effort, catches, prices, fishing gear with MARNDR.
- 1.19 **Organizational and technical strengthening of fisheries associations.** Each association will engage in a process of formalization and restructuring through specialized technical assistance given by the MARNDR and external providers. From a technical perspective, the associations will be trained to apply new fishing techniques including FADs. The associations supported by the PDPA project in the South and Grand'Anse will be mobilized to support the promotion and adoption of new fishing techniques among new beneficiary associations in the North and Northeast. Also, this component will contribute to the strengthening of the MARNDR at the central and local level to enable it to fulfill its role as a trainer for the associations, to collect catch data and to supervise the implementation of the co-financing mechanism.
- 1.20 Specific actions will be proposed to ensure women and youth inclusion. The program will provide drying and conservation equipment. The coolers, solar freezers and refrigerators are mainly equipment benefitting women merchants. Additionally, anticipating an increase in the supply of fish and thus, the possible need for fish-drying facilities, the program includes simple training on equipment construction.
- 1.21 **Component 3: Rehabilitation of rural roads to improve access to markets (HA-J0002: US\$25,937,110).** This component aims to improve road accessibility and consequently decrease transportation costs, production losses and increase access to markets through the rehabilitation of rural roads located in Component 1 and 2 areas.
- 1.22 **Rehabilitation of rural roads.** Around 75km in the North and North-East have been prioritized for rehabilitation ([OEL#6](#)). For the prioritization of rural roads, a technical analysis was conducted using a set of criteria such as the cost of rehabilitation per kilometer, agricultural area affected by the intervention, benefited population, presence of local markets, geographical synergies with existing operations and environmental impact assessment. The road rehabilitation will include, among others: the correction of roadbeds, the construction of drainage and retention structures, the protection of the embankments, and for road sections with steep slopes or present in flood zones the placing of cold sealing or the concreting of the roadway to ensure greater sustainability of the interventions. A significant part of the rehabilitation works does not require complex engineering and can be carried with labor-based work (HIMO) following a community-based approach. The works would be carried out in collaboration with the United Nations Office for Project Services (UNOPS), considering its experience on similar projects in Haiti, Africa, and other regions. To ensure adequate supervision of works, the MARNDR will be supported by a team from the MTPTC with experience in similar works, and especially in works implemented by UNOPS. In addition, the MARNDR

will hire a supervision firm to: (i) monitor the progress of the work; and (ii) provide technical assistance to the DIA for overall supervision.

- 1.23 **Maintenance.** The MARNDR and the DIA, will be strengthened in terms of equipment and personnel, both at central and local level. The maintenance of the rehabilitated roads will rely on strengthened local communities: (i) an inventory of tool needs, and training outputs will be developed to support local organizations to establish maintenance brigades in each commune; (ii) the Departmental Directorates of the MARNDR will be trained to use light equipment and some off-road activities will be implemented during the project. Road maintenance after program completion will therefore be possible through these brigades. The MARNDR will prepare an annual maintenance plan for planning and reporting of works.
- 1.24 Specific actions will be proposed to ensure women inclusion in Component 3. The program will organize trainings for women to ensure their participation during rural road rehabilitation. It will set a target of 40% of female labor participation for the rehabilitation of rural roads. Lastly, it will establish “women communication leaders” in the different areas of the project, who will channel feedback from women beneficiaries on potential inappropriate behaviors of local partners and/or on the quality of the good or service received through the program.
- 1.25 **Component 4. Rehabilitation of fishery infrastructures to improve access to markets (HA-J0002: US\$2,060,000).** The program will finance: (i) investment in climate-resilient public infrastructure, including landing infrastructure and fish markets; and (ii) technical assistance to local government and fishers’ associations to ensure sustainable operations and maintenance of fishing facilities ([OEL#5](#)).
- 1.26 **Fisheries infrastructures.** The infrastructures to be built and rehabilitated are: (i) the reconstruction of a dock in the municipality of Caracol. Due to its exposure to cyclones and the risk of sea level rise, the design and execution of the works will consider the following CC resilience and adaptation criteria: study of coastal dynamics, climate change scenario, durable and resistant materials; and (ii) the construction of three fish markets that will be financed by the proposed program once the final design being developed with PDPA is approved.
- 1.27 **Technical assistance:** Through the technical assistance mechanism of Component 2, the beneficiary associations and local communities will be accompanied by the MARNDR to facilitate the management of the infrastructures.
- 1.28 **Other Costs (HA-J0002: US\$5,866,775; HA-G1050: US\$727,583).** Other activities to be financed include: (i) administration (e.g., consultants, equipment, operational costs); (ii) evaluation activities and audits; and (iii) contingencies.

B. Key impact indicators

- 1.29 The Results Framework (Annex II) has been agreed with the Government of Haiti and includes the program’s impacts, results and outputs, as well as their respective indicators. Table 2 summarizes the program’s key impact and result indicators.

Table 2. Key Indicators

Key indicator	Measurement period	Selection rationale
GDO: Improve the food security of rural households, including farmers, fishers, seafood merchants and rural workers in the target departments.		
Percentage of male-headed and female-headed households who are severely food insecure using the Food Security Scale (ELCSA)	Y1 and Y5	It measures the degree of food insecurity faced by male- and female-headed households.
SDO 1: Improve food availability by improving productivity		
Annual value of agricultural production for male-headed and female-headed households	Y1 and Y5	It measures the production levels by farming households, both male- and female-headed, in US\$ value per household per year. Higher levels of production improve food availability for farmers and consumers.
Captures of pelagic fish per fisher per fishing trip	Y1 and Y5	It measures the levels of fishery catches by fisher, in Kg of seafood harvest per fisher per trip. Higher levels of captures improve fish availability for fishers and consumers.
Rural Access Index	Y1 and Y5	It measures population access to an all year motorable road. This variable is a proxy that captures food availability as it assesses accessibility to food and input markets.
SDO 2: Improve food access by increasing revenues		
Annual agricultural income	Y1 and Y5	It measures the income generated from the sales of crops, expressed in US\$ value per household per year. Higher levels of agricultural income improve farmers' food access.
Income from fisheries per fisher per fishing trip	Y1 and Y5	It measures fishers' income from sales of seafood products, expressed in US\$ in sales per fisher per trip.
Jobs created through rehabilitation of rural roads	Y1 and Y5	It measures jobs created through HIMO teams as well as sub-contractors. The incomes associated improve workers' food access.

- 1.30 **Intervention areas.** Project activities will be carried out primarily¹⁸ in the North and Northeast departments of Haiti that are qualified as [“food crisis” zones](#). Some of the key criteria for selecting the intervention areas was their food security status, nature and potential of agricultural production systems, quality of infrastructures and the executing agency's capacity to intervene effectively. In line with post-earthquake and COVID-19 responses, through Component 1, the GAFSP co-financing will also support farmers in the South and Grand'Anse (also in food crisis) to complement the ongoing activities financed by PITAG and the GAFSP to strengthen post-production support. Components 2 and 4 will complement the support to fishers and merchants associations currently targeted by PDPA in the Southern region to complete the equipment of the beneficiary associations and to strengthen access to markets through rehabilitated fishing infrastructures. Finally, all rural roads of Component 3 are in the North and Northeast departments.

¹⁸ Eighty percent of planned activities.

- 1.31 **Beneficiaries.** Component 1 will have 10,352 beneficiaries (1,786 by Year 1; 5,526 by Year 2; 7,918 by Year 3; 9,752 by Year 4) directly benefiting from the agricultural incentive mechanism, in the form of technological packages and technical assistance. Women will represent 46% of these beneficiaries. Component 2 will target a total of 65 fishers' and merchants' associations, all of which will receive institutional strengthening, equipment and technologies through matching grants already from Year 2. Component 3 will target the rehabilitation of 75km of rural roads by Year 3. As part of the rehabilitation works, 3,167 temporary local jobs will be created by Year 3 (1,267 by Year 1; 2,533 by Year 2). Of these, 40% will be assigned to women. Component 4 will support the rehabilitation of fisheries infrastructures used by beneficiaries' associations of Component 2. The beneficiary selection criteria for all components are detailed in ([OEL#8](#)).
- 1.32 **Economic analysis.** An ex-ante economic analysis was performed for each component and for the overall program ([OEL#1](#)), using a discount rate of 12% and a time horizon of 15 years. The economic analysis included all investment, recurrent and maintenance costs. The benefits considered include improved revenues from agriculture and fisheries technologies, rehabilitated rural roads and improved fishery infrastructure. The Internal Rate of Return (IRR) of the program is 16,94% with a Net Present Value (NPV) of US\$12,8 million. This implies that the program is viable from a socio-economic perspective.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 The total program amount is US\$78,300,000. The Grant Facility will finance US\$60,000,000 and the GAFSP¹⁹ will finance US\$18,300,000. Table 3 provides the cost summary by investment categories and components.
- 2.2 **GAFSP co-financing.** Additional funding for this operation has been pre-approved by GAFSP following two processes ([OEL#20](#)). First, in 2019 GAFSP pre-approved a first financing tranche of US\$14,000,000, to expand the number of direct beneficiaries of 4359/GR-HA and "to reinforce the realization and sustainability of its expected results" in the Northern, Northeastern, Southern and Grand'Anse departments. For this purpose, the GoH proposed the integration of complementary activities such as seed research and production, and the provision of post-harvest technologies, along with capacity building in processing and marketing. In 2020, GAFSP pre-approved a second tranche of US\$4,300,000. This proposal provided incentives for farmers to produce short-cycle food crops for COVID-19 response. These funds will feed into Component 1 of the proposed operation and will support the program administration and evaluation. The MARNDR has a proven track record of successful program execution using GAFSP funds: specifically, PITAG has already received US\$10 million, with

¹⁹ On January 26, 2011, the Bank signed a transfer agreement with the International Bank for Reconstruction and Development (IBRD), within the framework for the Proposal for the establishment of the Global Agriculture and Food Security Program Trust Fund (GN-2590-1), date from which the Bank has become a Supervisory Entity for the GAFSP. This operation will be co-financed with resources from the GAFSP. The availability of said resources will be subject to the approval from GAFSP Steering Committee of the pertinent project.

disbursements starting in 2019. To date, 60% of the GAFSP PITAG funds have been disbursed; the total amount is expected to be disbursed by Q3 of 2022.

Table 3. Summary of Program Costs (in US\$)

Components / Main activities ²⁰	IDB	Co-financing	Total	%
Component 1: Support to farmers productivity	19,322,495	17,572,417	36,894,912	47
<i>Production incentives</i>	12,220,000	14,963,600	27,183,600	35
<i>Technical assistance</i>	5,102,495	2,608,817	7,711,312	10
<i>Others</i>	2,000,000	-	2,000,000	2
Component 2: Support to fishers productivity	6,813,620	-	6,813,620	9
<i>Production incentives and trainings</i>	3,788,774	-	3,788,774	5
<i>Technical assistance (MARNDR)</i>	3,024,846	-	3,024,846	4
Component 3: Rehabilitation of rural roads to improve access to markets	25,937,110	-	25,937,110	33
<i>Rehabilitation of roads</i>	20,597,106	-	20,597,106	26
<i>Supervision</i>	3,302,316	-	3,302,316	4
<i>Others</i>	2,037,688	-	2,037,688	3
Component 4: Rehabilitation of Fishery infrastructures to improve access to markets	2,060,000	-	2,060,000	3
<i>Rehabilitation works</i>	1,500,000	-	1,500,000	2
<i>Conception, Supervision ESMP</i>	560,000	-	560,000	1
Administration, Audit and M&E	5,866,775	727,583	6,594,358	8
Total	60,000,000	18,300,000	78,300,000	100

- 2.3 The proposed operation has been designed as an investment grant operation since the activities to be financed will have specific objectives and their successful execution will be linked to their indivisibility. The project disbursement period will be five years based on the multi-year planning exercise carried out ([REL#1](#)) and considering the experience with projects of similar scope in Haiti (¶I.1.8). The disbursement calendar is presented in Table 4.

Table 4. Disbursement Calendar

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB	10,654,269	14,686,461	14,303,470	13,787,616	6,568,184	60,000,000
GAFSP	960,000	5,797,228	5,036,453	4,443,736	2,062,583	18,300,000
TOTAL	11,614,269	20,483,689	19,339,923	18,231,352	8,630,767	78,300,000
%	15%	26%	25%	23%	11%	100%

B. Environmental and social safeguard risks

- 2.4 Given the nature of the proposed interventions, and their location, it is anticipated that the environmental and social impacts and risks are likely to be mostly local and short term, for which effective mitigation measures are readily available ([OEL#21](#)). A Category “B” classification has therefore been assigned to the operation in accordance with the IDB’s Environment and Safeguards Compliance Policy (OP-703). Additionally, the operation, as per the Bank’s Disaster Risk

²⁰ The costs by main activities are indicative.

Management Policy (OP-704), has been assessed for disaster risks and is categorized “moderate” due to the risks of tropical storms, hurricanes, and earthquakes.

- 2.5 Key positive impacts expected include: (i) improved fish stocks in the coastal zone in the long term with the development of fishing in the targeted departments for the fisheries component; and (ii) reduced risks of landslides and sedimentation in the rivers with the planting of fruit trees, cocoa trees, and coffee trees.
- 2.6 Key potential negative impacts and risks include: (i) for Component 1: risk of over-exploitation of water resources (aquifers and rivers) due to the financing of an excessive number irrigation equipment, potential deforestation, and introduction of invasive species. No activities are expected to negatively impact natural or critical natural habitats; (ii) for Component 2: increased pressure on the resource and accidental capture of unwanted fishes (such as protected species) as well as contamination and pollution from waste oil linked to increased use of boat motors, and by outdated fishing equipment and waste associated with product processing activities; (iii) for Component 3: risks associated with extraction of stones and gravel. No activities are expected to be in natural or critical natural habitats; and (iv) for Component 4: risk associated with the exposure of the dock to be rehabilitated to extreme events and sea level rise. Based on those impacts and risks as well as complicated contextual risk in Haiti, the operation has been assigned with a “substantial” rating for environmental and social risks. The operation is not expected to have resettlement, displacement, or land acquisition.
- 2.7 The implementation of the Environmental and Social Management Plan (ESMP) will mitigate the potential environmental and social impacts and risks identified (§2.6). It includes different plans associated with waste, hazardous waste, biodiversity, stakeholder engagement (including grievances and consultation), materials extraction, health and safety and emergency response. The Environmental and Social Assessment (ESA) ([OEL#21](#)) includes a qualitative assessment for the operation which is step 4 of the IDB’s Disaster and Climate Change Risk Assessment Methodology. No additional assessment (such as a Disaster Risk Assessment) will be needed based on the type activities under the grant. Meaningful consultations were held between September 29th and October 4th, 2021, which included 8 events in the North and 10 in the Northeast of Haiti and were led by the MARNDR through small gatherings where more than 250 people participated. Key stakeholders participated in the event such as Non-Governmental Organizations (NGOs), Municipal Assemblies and Local Authorities, Farmers', Fishers and Basic Community Organizations, Organized Civil Society, Public and Private Universities and Community Leaders. Main comments were linked to some perceived weaknesses in the capacity of the MARNDR to ensure adequate implementation of the ESMP, the need to ensure that grievance are addressed, and the need for more training for the fisheries component. The results of the consultation were incorporated in the final ESA and measures have been developed to address them. The consultation report, as part of the final ESA, was disclosed in the IDB website

C. Fiduciary risk

- 2.8 Fiduciary risk is medium-high because of possible delays in the justification of advance of funds due to increased workload, and to the late submission of supporting documents for activities implemented which could affect the timely replenishment of project accounts as well as the project execution, particularly for activities related to Components 2, 3 and 4. To mitigate these risks, the following measures will be undertaken: (i) recruiting of an administrative assistant, three accountants and the recruitment of four field agents in support to the Agricultural Department Directorate (DDA) to facilitate the submission of supporting documents; (ii) maintaining the fiduciary independence of each technical component, which have different technical capacities and seasonal obligations and therefore different rhythms of justification, by opening designated accounts for each of them; and (iii) and the hiring of a specialized agency to provide technical assistance and ensure the delivery of services related to Component 3.

D. Other risks and key issues

- 2.9 The deterioration of the country's socio-political environment was identified as a High Risk. Indeed, due to recurrent social unrest, political turnovers, and insecurity, the execution of the project may face important delays and thus an overrun in project duration and difficulties to reach beneficiaries. To mitigate these risks a set of specific technical and execution measures adapted to the fragility context has been identified based on lessons learned ([OEL#8](#); [OEL#4](#)): (i) Adapted execution mechanism: the MARNDR has achieved positive results in implementing similar operations in the past years. Therefore, the existing executing mechanism and the same EU with a proven track record in execution will be mobilized and strengthened for the management of the technical components as well as for fiduciary and procurement management. For all components, the MARNDR, through its decentralized presence, has demonstrated its capacity to execute similar activities even when the capital city is locked in stalemate. The program will make great use of this decentralized execution modality at the departmental and communal levels to ensure beneficiaries are reached. As for the rural roads, based on the current situation of ongoing projects in the transport sector and after an analysis of the capacities of the local companies to carry out the works in the allotted time, according to environmental and social standards and in the context of fragility, it was decided to contract UNOPS which has demonstrated its ability to carry out similar interventions in Haiti in recent years. (ii) Adaptive management and supervision: A readiness plan ([OEL#19](#)) identifying all potential bottlenecks and associated mitigation measures at all stages of the project has been developed during the design and will be continuously updated and implemented during execution through operational monitoring tools and close supervision by the Bank.
- 2.10 A medium-high risk linked to the executing agency's internal processes, this risk refers to the possible delays in starting the activities related to the outputs of Components 1 and 3 if contracting the Service Providers exceeds six months after eligibility. If so, these activities will start in year 2, which would require additional time to meet the expected results. To mitigate this risk, critical procurement

processes were identified in section III (Main acquisitions) of Annex III and will be launched before project eligibility.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Executing mechanism.** The executing agency (EA) will be the MARNDR, which has been in charge of the execution of most Bank-financed operations in the sector for the past thirty years, and currently manages an active portfolio totaling approximately US\$130 million, that will reach a disbursement level of 85% by the end of 2021. The program will be executed through existing executing mechanisms of the three technical directorates of the MARNDR: (i) for Component 1: the Direction de l'Innovation (DI) – currently executing PITAG; (ii) for Components 2 and 4: the DPAQ – currently executing PDPA; and (iii) for Component 3 the DIA. The financial management will be done by existing MARNDR Financial Management Units (CGF for Components 2,3 and 4 and PITAG for component 1) for accounting and financial aspects. Regarding procurement, the processes for all components will be carried out and managed by the Procurement Unit (UPMP) of the MARNDR ([OEL#10](#)). A program coordination committee will be created. It will consist of the three technical coordinators of Components 1, 2-4 and 3. This committee will ensure the consolidation of technical and financial information for the overall reporting to the IDB. Disbursements will be executed as stated in Section IV of Annex III Treasury and Disbursement Management.
- 3.2 The existing execution mechanism within MARNDR will be strengthened by: (i) the ongoing implementation of a series of institutional strengthening measures (I&D, 2018b); and (ii) the adoption of readiness measures (¶1.8) for each stage of the project life cycle ([OEL#19](#)).
- 3.3 Regarding Component 3, MARNDR will oversee the fiduciary management of the contracts as well as the technical supervision and validation. It will be technically supported by the MTPTC for the technical supervision of the works. A memorandum of understanding detailing the modalities of this support will be signed by both institutions ([OEL#17](#)). Regarding the execution of works, following the analysis of: (i) MARNDR institutional capacity; (ii) execution risks; and (iii) potential service providers ([OEL#7](#)),²¹ it was agreed with the GoH to choose a specialized agency (UNOPS) to carry out this activity under a turnkey modality. UNOPS will be responsible for the overall implementation of the works, including technical control and providing quality assurance, hiring of local labor, subcontracting to private companies for some specific mechanical works, purchasing materials. To ensure that the works are carried out properly, the DIA will be supported by an external supervisor who will: (i) supervise the technical control of works; (ii) verify the quality of the services; (iii) advise on the need for

²¹ Capacity to manage: (i) heterogeneous distribution of intervention areas; (ii) activities in a fragile context; (iii) works involving a strong social dimension of HIMO; and (iv) integrate ESG, gender and diversity measures.

adjustments or increases in activities; and (iv) provide a technical assistance program for training the DIA personnel in supervision activities.

- 3.4 **Special Contractual Conditions prior to the first disbursement of the financing: The Beneficiary, through the Executing Agency, will provide evidence to the satisfaction of the Bank of: (i) the official designation of the key personnel of the Project Execution Unit (PEU), including at least the coordinators of the three technical directorates and a Monitoring and Evaluation (M&E) specialist to ensure adequate execution of the program; and (ii) the approval and entry into effect of the [Program Operating Manual \(POM\)](#) according to the terms and conditions previously agreed with the Bank.** These clauses are considered essential to guarantee that the Beneficiary will be prepared to begin the execution of the program with a qualified team as well as with guidelines on operational and coordination aspects.
- 3.5 **Special Contractual Condition prior to the execution of Component 3.** In addition to the conditions prior to first disbursement, the Beneficiary, through the Executing Agency, will provide evidence to the satisfaction of the Bank of: (i) the signature by the MARNDR and the Ministry of Public Works, Transport and Communications (MTPTC) of a collaboration agreement ([OEL#17](#)) for the monitoring and supervision of rehabilitation works; and (ii) the draft contract to be signed with UNOPS ([OEL#22](#)). These clauses are considered essential to guarantee that the Beneficiary will be prepared to begin the execution of the program with an approved supervision system identifying the responsibilities of each Ministry and for the UNOPS contract, an early contracting process to ensure timely execution.
- 3.6 **Program Operating Manual (POM).** The POM ([OEL#11](#)) will define the standards and procedures for programming, procurement, audits, monitoring and evaluation, environmental and social safeguards management. The POM will include, among others, the following: (i) a detailed description of the implementation agreement of each component including incentives and agricultural fairs operating manuals ([OEL#12](#) and [OEL#13](#)) for suppliers for Component 1, matching-grant manual for Component 2 ([OEL#14](#)); (ii) roles and responsibilities of the agencies involved in the implementation of the program; (iii) procedures to select and contract goods and services; (iv) procedures for management and financial control of the program; (v) monitoring and evaluation arrangements; (vi) specific environmental and social measures of the program, as described in the ESMR ([REL#3](#)); (vii) specific requirements regarding the design and construction options to insure the climate resilience of the Component 4 infrastructures; (viii) list of all activities accounted for CC finance ([OEL#16](#)); (ix) specific gender measures of the program presented in the gender plan ([OEL#15](#)); and (x) specific maintenance planning and reporting measures for Component 3.
- 3.7 **Procurement.** All program-related procurement activities will be performed following Bank's Policies for the Procurement of Goods and Works financed by the Bank (GN-2349-15) and Policies for the Selection and Contracting of Consultants financed by the Bank (GN-2350-15) as applicable. In addition, prior to any procurement being initiated for this program, the EA will be required to prepare and submit to the Bank a draft General Procurement Notice for publication on the

IDB's website and United Nations Development Business. Two procurement activities ([REL#4](#)) will be carried out by direct contracting:

- a. **United Nations Office for Project Services (UNOPS).** Given the fragility of Haiti, the risks identified in (¶2.9) and due to MARNDR's lack of necessary resources to execute Component 3, UNOPS will be hired as a specialized agency responsible for coordinating the execution of works, purchasing materials, and hiring labor for the execution of rural road works. The direct contracting of UNOPS is justified under GN-2350-15 (d) as only one firm is qualified or has experience of exceptional worth for the assignment, considering its renowned experience on similar projects in Haiti, Africa, and other parts of the world. Furthermore, UNOPS has demonstrated its ability to intervene, mobilize and deliver quality works in the context of fragility (similar work underway with the World Bank since 2019) as well as during the various natural and social crises experienced by Haiti in recent years ([OEL#7](#)). In Haiti, UNOPS' engagement in IDB-financed projects has been one of the most important in the region in the past 10 years, with nine collaborations in total. Two of these projects included UNOPS' participation in road construction, repair and stabilization, by promoting a labor-intensive approach. The total budget for this activity will amount to approximately US\$20 million.
- b. **Food and Agriculture Organization (FAO).** FAO will support the MARNDR in the implementation of Farmers' school fields and business school fields (Component 1, GAFSP financed). The direct contracting is justified under GN-2350-15 (d), which applies when only one firm is qualified or has experience of exceptional worth for the assignment. FAO has developed this unique methodology in the world and in Haiti that focuses on building the capacity of farmers and rural communities to analyze their production cycle and identify their main constraints, as well as to test possible solutions. The total budget for this activity will amount to approximately US\$1.8 million.

- 3.8 **Financial and auditing reports.** Throughout the grant disbursement period, the Executing unit will submit the Bank audited financial statements of the project as follows: (i) annual financial audits of the project to be submitted within 120 days after the closure of each fiscal year and (ii) a final financial audit of the project to be submitted within 120 days after the date of the last disbursement. The CGF will be responsible for the recruitment of the audit firm and the consolidation of financial reports to be presented to the audit firm. Audit will be conducted by a Bank-eligible independent audit firm. Audit costs will be financed with project resources. For audit purposes, the Haitian fiscal year will be used.

B. Summary of arrangements for monitoring results

- 3.9 It will be the EA's responsibility to put in place a monitoring system to collect data related to all the indicators in the Results Framework. This system will be instrumental for the EA to be able to submit to the Bank semi-annual progress reports that will describe among others: (i) the physical and financial progress; (ii) outcomes and impacts progress, as stipulated in the Results Framework; and (iii) the status of applicable environmental and social mitigation measures.

- 3.10 An impact evaluation will be conducted to measure the program's impact and results. Specifically, the impact evaluation will be a combination of experimental and quasi-experimental techniques. The monitoring and evaluation plan presents the methodology, data collection plan, indicators to be measured, sample design and budget allocated to each activity ([REL#2](#)). For Component 1, a randomized controlled trial (RCT) will be implemented to measure the impact of agricultural technological packages on food security, agricultural productivity, and rural incomes. For Component 3, a quasi-experimental approach will be used to measure the impact of rural road rehabilitations on food security, agricultural productivity, and rural incomes in the areas of intervention. The total cost of monitoring and evaluation amounts to US\$807,000.

Development Effectiveness Matrix		
Summary HA-J0002; HA-G1050		
I. Corporate and Country Priorities		
Section 1. IDB Group Strategic Priorities and CRF Indicators		
Development Challenges & Cross-cutting Issues	-Social Inclusion and Equality -Productivity and Innovation -Gender Equality and Diversity -Climate Change	
CRF Level 2 Indicators: IDB Group Contributions to Development Results	~Jobs supported (#) -Farmers with improved access to agricultural services and investments (#) -Roads built or upgraded (km) -Women beneficiaries of economic empowerment initiatives (#) -Beneficiaries of enhanced disaster and climate change resilience (#)	
2. Country Development Objectives		
Country Strategy Results Matrix	GN-2915	Improve the business climate to enhance productivity
Country Program Results Matrix	GN-3034-2	The intervention is included in the 2021 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		Evaluable
3. Evidence-based Assessment & Solution		10.0
3.1 Program Diagnosis		2.5
3.2 Proposed Interventions or Solutions		3.5
3.3 Results Matrix Quality		4.0
4. Ex ante Economic Analysis		10.0
4.1 Program has an ERR/NPV, or key outcomes identified for CEA		1.5
4.2 Identified and Quantified Benefits and Costs		3.0
4.3 Reasonable Assumptions		2.5
4.4 Sensitivity Analysis		2.0
4.5 Consistency with results matrix		1.0
5. Monitoring and Evaluation		8.9
5.1 Monitoring Mechanisms		3.4
5.2 Evaluation Plan		5.5
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood		Medium High
Environmental & social risk classification		B
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)		
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
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	Support to the MARNDR institutional capacity through the support of the public management firm I&D. Technical designs were supported by HA-T1247.

The general objective of this operation is to improve the food security of rural households, including farmers, fishers, seafood merchants and rural workers in the target departments. The specific objectives are: (i) to improve food availability by improving productivity through the adoption of climate resilient agricultural technologies and rural infrastructures; and (ii) to improve food access by increasing revenues.

In general, the diagnosis is adequate, with a well-identified problem and clear determinants. The results matrix exhibits vertical logic with clear specific objectives and SMART results indicators that allow demonstrating achievement. The economic analysis consisted of estimating the benefits of the program through a Cost Benefit Analysis (CBA) for Components 1, 2, 3 and 4.

The program has a Monitoring and Evaluation Plan that specifies: (i) the methodologies for measuring the indicators; (ii) the impact evaluation methodology; (iii) data requirements; and (iv) those responsible, and the estimated budget. An experimental impact evaluation is proposed to evaluate the effect of the adoption of agricultural technologies on agricultural production, income and food security. A quasi-experimental method will be used to evaluate the effect of the construction and maintenance of rural roads on income and food security.

RESULTS MATRIX

Project Objective: The general objective of this operation is to improve the food security of rural households, including farmers, fishers, seafood merchants and rural workers in the target departments. The specific objectives for this operation are: (i) to improve food availability by improving productivity through the adoption of climate resilient agricultural technologies and rural infrastructures; and (ii) to improve food access by increasing revenues.

General Development Objective

Indicators	Unit of measurement	Baseline value	Baseline year	Expected year for achievement	End-of-Project Target	Means of verification	Comments
General development objective: Improve the food security of rural households, including farmers, fishers, seafood merchants and rural workers in the target departments.							
I.1. Percentage of male-headed households who are severely food insecure	%	71	2015	2026	49	Impact Evaluation (IE)	<p><u>Baseline (BL):</u> The BL number will be updated through surveys to be conducted prior to program implementation. The baseline values correspond to baseline values of PT TA using the ELCSA indicator.</p> <p><u>Target:</u> Based on the CRIAR impact evaluation.</p> <p><u>The target will be measured using the Food Insecurity Experience Scale (FIES)</u></p>
I.2. Percentage of female-headed households who are severely food insecure	%	86	2015	2026	60	IE	<p><u>BL:</u> as for I.1 using the ELCSA indicator</p> <p><u>Target:</u> Based on the CRIAR impact evaluation.</p> <p>The target will be measured using the FIES indicator.</p> <p>Gender Flag</p>

Specific Development Objectives

Indicators	Unit of measurement	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
Specific development objective 1: Improve food availability by improving productivity through the adoption of climate resilient agricultural technologies and rural infrastructures											
I.1.1. Annual value of agricultural production for male-headed households	US\$/house hold/year	459	2020					633	633	IE	<u>BL</u> : The BL number will be updated through (i) surveys currently being administered as part of PITAG and (ii) surveys to be conducted prior to the implementation of PAPAIR. The baseline values come from the IE of the RESEPAG 2 program. <u>Target</u> : Based on the IE of PTTA, which estimates an increase of 38% in the value of agricultural production when applying agroforestry packages.
I.1.2. Annual value of agricultural production for female-headed households	US\$/house hold/year	298						411	411		
I.1.3. Percentage of new beneficiary male producers who adopt agricultural technologies	%	0	2021					73.3	73.3	IE	<u>BL</u> : Refers to beneficiary farmers of Outputs 1. <u>Target</u> : PCR of the PTTA program.
I.1.4. Percentage of new beneficiary female producers who adopt agricultural technologies	%	0	2021					73.3	73.3	IE	<u>Target</u> : The target represents the percentage of adopters observed in PTTA, but also in similar projects in the region. Gender Flag
I.1.5. Percentage of beneficiary fishers in the North and North-east departments who adopt offshore fishing techniques	%	0%	2021					70	70	IE	Offshore fishing techniques refer primarily to FAD fishing. <u>Baseline</u> : <u>BL</u> : MARNDR-Gachot (2021). <u>Target</u> : Target set by DPAQ-MARNDR
I.1.6. Captures of pelagic fish per fisher per fishing trip	KG/fisher/ trip	0.373	2015					1	1	IE	<u>BL</u> : The BL number will be updated through (i) surveys currently being administered as part of the baseline HA-L1096 and (ii) surveys to be conducted prior to the implementation of PAPAIR. Baseline values : HA-L1096. <u>Target</u> : Based on the results matrix of the PDPA.

Indicators	Unit of measurement	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
I.1.7. Rural Access Index	%	38	2021					65	65	Final evaluation	<u>Baseline:</u> UNOPS (2021). <u>Target:</u> UNOPS (2021). RAI is a World Bank indicator defined as the share of rural people living within 2 Km of the nearest all-season motorable road.
I.1.8. Beneficiaries of enhanced disaster and climate change resilience	#	0	2021					6,461	6,461	Field visits and project progress report	<u>Target:</u> It corresponds to beneficiaries from climate-resilient technologies (beneficiaries of agroforestry packages and of Output 13) listed in the ROP. CRF indicator flag #20
Milestone. Women beneficiaries farmers of enhanced disaster and climate change resilience	#	0						2,857	2,857	Field visits and project progress report	<u>Target:</u> It corresponds to 46% of the total number of agroforestry packages recipients (Output 1).
Specific development objective 2: Improve food access by increasing revenues											
I.2.1. Annual agricultural income	US\$/house hold/year	173	2017					273	273	IE	Includes only income from sales of crops (not livestock). <u>BL:</u> IE of PTТА. <u>Target:</u> Based on the IE of PTТА, which estimates an increase of 58% in annual agricultural income when applying agroforestry packages.
I.2.2. Income from fisheries per fisher per fishing trip	US\$/fisher/ trip	11.6	2021					17.4	17.4	IE	<u>BL:</u> MARNDR-Gachot (2021). <u>Target:</u> Target values come from the results matrix of PDPA: +50%. <u>Definition:</u> Fishers' income from sales of seafood products.
I.2.3. Gross value of fish sales (merchants)	Average in last 7 days (US\$)	221	2021					331	331	IE	<u>BL:</u> MARNDR-Gachot (2021). <u>Target:</u> Target values come from the results matrix of PDPA: +50%.
I.2.4. Jobs created through rehabilitation of rural roads	Rural jobs	0	2021	1,267	2,533	2,533	0	0	3,167	Field visits and project progress report	Includes jobs created through UNOPS's HIMO teams as well as sub-contractors. <u>Target:</u> UNOPS (2021). CRF indicator flag #8
I.2.5. Percentage of women hired for road rehabilitation	% Female jobs	0	2021	40	40	40	0	0	40	Field visits and project progress report	<u>Target:</u> PAPAIR's Gender Plan.

Outputs

Indicators	Unit of measurement	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
Component 1: Support to farmers productivity											
<u>Output 1:</u> Beneficiary farmers who received technological packages	#	0	2021	1,786	3,740	2,392	1,834	600	10,352	Field visits and project progress report	Includes beneficiaries of agroforestry, irrigation, annual crops and post-harvest packages. CRF indicator flag #11 Contributes to GAFSP Core Indicator #3
<i>Milestone 1. Women who received technological packages</i>	%	0	2021	46	46	46	46	46	46		This milestone is a % of beneficiaries of Output 1. <u>Target:</u> PAPAIR's Gender Plan. Gender Flag
<i>Milestone 2. Beneficiary farmers who received climate-resilient technical packages</i>	%	0	2021	60	60	60	60	60	60		This milestone is a % of beneficiaries of Output 1. Climate-resilient technological packages refer to agroforestry and irrigation technological packages. CRF indicator flag #16
<u>Output 2:</u> Beneficiary farmers who received technical assistance with a gender approach	#	0	2021	1,786	3,740	2,392	1,834	600	10,352		Beneficiaries of technological packages (Output 1) will receive agricultural technical assistance. Contributes to GAFSP Core Indicator #3
<i>Milestone. Women beneficiary farmers who received agricultural technical assistance</i>	%	0	2021	46	46	46	46	46	46		This milestone is a % of beneficiaries of Output 2. Gender Flag
<u>Output 3:</u> MARNDR's communal (BAC) and departmental (DDA)	# Offices	0	2021	0	0	0	0	60	60		

Indicators	Unit of measurement	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
offices trained and strengthened											
<u>Output 4:</u> Demonstration plots implemented	#	0	2021	72	72	72	0	0	216		
<u>Output 5:</u> Farmers who received support to produce quality seeds	#	0	2021	0	0	300	300	0	600		Financed by GAFSP. Contributes to GAFSP Core Indicator #3 and #13
<i>Milestone. Women farmers who received support to produce quality seeds</i>	%	0	2021			40			40		This milestone is a % of beneficiaries of Output 5. Gender Flag
<u>Output 6:</u> Farmers who participated in Farmer Field School (FFS)	#	0	2021	0	1,180	1,245	875	0	3,300		Financed by GAFSP. Contributes to GAFSP Core Indicator #3 and #13
<i>Milestone. Women farmers who participated in FFS</i>	%	0	2021			40			40		This milestone is a % of beneficiaries of Output 6. Gender Flag
Component 2: Support to fishers productivity											
<u>Output 7:</u> MARNDR's Fisheries Directorate (DPAQ) strengthened	Directorate	0	2021					1	1	Field visits and project progress report	Includes the purchase of equipment and the recruitment of technical assistance to support project execution by the Fisheries Directorate. Non-cumulative indicator.
<u>Output 8:</u> Association of fishers and merchants trained	# Associations	0	2021	45	65	65	20	20	65		Non-cumulative indicator. Continuous trainings for the same 65 associations
<u>Output 9:</u> Association of fishers and merchants receiving new equipment and fishing technologies through matching grants	Association	0	2021	45	45	55	20	20	65		Non-cumulative indicator.

Indicators	Unit of measurement	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
Component 3: Rehabilitation of rural roads to improve access to markets											
Output 10: Rural roads rehabilitated	Km	0	2021	14.7	29.7	30.1			74.5	Field visits and project progress report	The roads rehabilitated will be in the North and Northeast departments. <u>Note:</u> The rehabilitation designs will ensure that the roads are protected from climate shocks by using appropriate materials and/or design parameters that enhance their robustness and reparability. CRF indicator flag #13
Output 11: Training to facilitate women labor participation in rehabilitation works	Training	0	2021	2	3	3			8		Training will be held in all the departments where roads will be rehabilitated. Gender flag
Component 4: Rehabilitation of Fishery infrastructures to improve access to markets											
Output 12: Public fish markets built/rehabilitated	Market	0	2021		2	1			3	Field visits and project progress report	
Output 13: Climate-resilient public landing/disembarkation sites built/rehabilitated	Infrastructure	0	2021			1			1		<u>Note:</u> The construction/rehabilitation designs will ensure that the landing/disembarkation sites are protected from climate shocks by using appropriate materials and/or design parameters that enhance their robustness and reparability as per the requirements included in the ROP.

FIDUCIARY ARRANGEMENTS AND REQUIREMENTS

Country: Haiti

Division: RND

Operation No.: HA-J0002; HA-G1050

Year: 2021

Executing Agency (EA): Ministry of Agriculture, Natural Resources and Rural Development (MARNDR)

Operation Name: Rural Productivity and Connectivity Program with a Territorial Approach

I. Fiduciary Context of Executing Agency

1. Use of country system in the operation (Any system or subsystem that is subsequently approved may be applicable to the operation, in accordance with the terms of the Bank's validation).

<input type="checkbox"/> Budget	<input type="checkbox"/> Reports	<input type="checkbox"/> Information System	<input type="checkbox"/> National Competitive Bidding (NCB)
<input type="checkbox"/> Treasury	<input type="checkbox"/> Internal audit	<input type="checkbox"/> Shopping	<input type="checkbox"/> Others
<input type="checkbox"/> Accounting	<input type="checkbox"/> External Control	<input type="checkbox"/> Individual Consultants	<input checked="" type="checkbox"/> Executing Agency's own system

2. Fiduciary execution mechanism

<input checked="" type="checkbox"/>	Co-Financing	The Global Agriculture and Food Security Program (GAFSP) has pre-approved the following financing: A first tranche (US\$14,000,000) to reinforce the realization and sustainability of the expected results in the Northern, North-eastern, Southern and Grande-Anse departments via research, post-harvest technologies and capacity building; A second tranche (US\$4,300,000) for COVID-19 response activities bringing the total GAFSP financing to US\$18,300,000. These funds will be administered by IDB and feed into component 1 and support program administration and evaluation.
<input checked="" type="checkbox"/>	Particularities of the fiduciary execution	The executing agency (EA) will be the MARNDR, which has been in charge of the execution of most Bank-financed operations in the sector for the past thirty years, and currently manages an active portfolio totalling approximately US\$130 million. The program will be executed through existing executing mechanisms of the three technical directorates of the MARNDR: (i) for Component 1: the <i>Direction de l'Innovation</i> (DI) – currently executing PITAG; (ii) for Components 2 and 4 :4: the Directorate of Fisheries and Aquaculture (DPAQ) – currently executing PDPA and (iii) for Component 3 the Direction of Rural Infrastructure (DIA). MARNDR Financial Management Units (CGF for Components 2,3 and 4 and PITAG for Component 1) will be used for accounting and financial aspects. Procurement processes for all components will be carried out and managed by the Procurement Unit (UPMP) of the MARNDR (OEL#10). A program coordination committee will be created and composed of the three technical coordinators of Components 1, 2-4 and 3. This committee will ensure the consolidation of technical and financial information for the overall reporting to the IDB.

3. Fiduciary Capacity

Fiduciary Capacity of the EA	<p>The MARNDR's procurement unit - UPMP was created through a Ministerial Decree "M-AIDG/(C-17)09-13:1659 (bis)" on September 17, 2013 and has been operational since 2014. Based on technical findings by the Bank, this unit has proved to be technically solid in applying the Bank's procurement policies and has been handling procurement activities focusing on the quality of processes and in close collaboration with the technical teams. The unit has three levels: 1) One General Coordinator 2) Two Assistant Coordinators 3) Six procurement specialists supported by two assistants and two technicians. The UPMP has a system to process purchase requests and conduct procurement processes and is developing an improved filing system. UPMP is currently implementing a multi-target capacity building plan which allows to progressively consolidate the progress and improve its processes. The unit handles the processes of the IDB, WB and FIDA. No additional staffing is foreseen in the short term for HA-J0002 since similar operations will come to an end by the time HA-J0002 starts.</p> <p>Fiduciary aspects related to the execution of funds will be managed by the Financial Management Unit (CGF French acronym) of the MARNDR for Components 2, 3 and 4 and the Financial management unit of the PITAG for Component 1; both units have extensive experience in the financial management of Bank financed operations^[1] and will be responsible for the management of project resources including budgeting, accounting, reconciliation of bank accounts, justification of funds and submission of disbursement requests. The CGF, will be Bank's focal point for all aspect related to financial management of the project and will be responsible for consolidating financial information generated from the three technical directorates and overseeing the audit process. Modified cash basis is used for accounting purposes.</p> <p>[1] The Fiduciary team of BCP-PROBEBA was transformed into the "Cellule de Gestion Financière (CGF)" of the MARNDR in 2016 to oversee the financial management of IDB projects and has successfully executed operations HA0016, HA-L1021 and HA-L1087, and is currently implementing HA-L1096 and HA-L1094. The Financial Management Unit of PITAG successfully executed operation HA-L1059 and is currently implementing HA-L1107, HA-G1038 and HA-G1041.</p>
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4. Fiduciary risks and risk response

Risk Taxonomy	Risk	Risk level	Risk response
Internal processes	Possible delays in the justification of funds due to increased workload and to the late submission of supporting documents for activities implemented, which could affect the timely replenishment of project accounts and project execution particularly for Components 2, 3 and 4.	Medium - High	Project team will be strengthened by: (i) recruiting an administrative assistant and three accountants to support with logistics, accounting and the preparation of disbursement and justification requests for program activities; recruiting four field agents to support the DDA in submitting supporting documents; (ii) maintaining the fiduciary independence of each technical component by opening designated accounts for each of the three technical

			directorates which have different technical capacity and seasonal obligations and therefore different rhythms of justification; and (iii) hiring of a specialized agency to provide technical assistance and to ensure the delivery of Component 3 services.
Internal processes	If contracting of Service Providers takes longer than 6 months after eligibility, Component 1 and 3 outputs will start in year 2, which may require additional time to meet the results.	Medium-High	These procurement processes must start prior to program eligibility. Specific contractual elements to be finalized after eligibility.

5. Policies and Guides applicable to operation: GN-2349-15/GN-2350-15/OP-272-3

6. Exceptions to Policies and Rules: N/A

II. Aspects to be Considered in the Special Conditions of the Grant Agreement

Special conditions precedent to first disbursement:

Designated Accounts and authorized signatures: The MARNDR will open ten designated accounts one in USD and one in HTG per source of funds (IDB/GAFSP) for each of its three technical directorate at the Central Bank, Banque de la République d'Haïti (BRH): two accounts for the Fisheries-PDPA team (IDB financed), two accounts for the DIA (IDB financed) and six accounts for PITAG team: including two to be financed by IDB and four to be financed by GAFSP (two per GAFSP funds). The accounts will be exclusively for management of project funds. Authorized signatures will be sent to the IDB via the Ministry of Finance (MEF). Maintaining fiduciary independence of each technical directorate is essential to guarantee the flow of funds taking into consideration the different rhythms of execution related to the nature of the interventions (agricultural and fishing seasonality).

Exchange rate: The effective exchange rate on the date of conversion of the currency of the disbursement to the local currency of the Beneficiary will be used to convert expenses in local currency for reporting purposes as indicated in the subsection (b) (i) Article 4.10 of the General Standards. The BRH exchange rate will be used as the reference rate.

Audit and financial reporting: Throughout the grant disbursement period, the executing agency will submit audited financial statements as follows: (i) annual financial audit of the program within 120 days after the closure of each fiscal year; (ii) a final financial audit within 120 days after the date of the last disbursement. The CGF will be responsible for recruiting the audit firm and for consolidating the financial reports presented to the audit firm. Audits will be conducted by a Bank-eligible independent audit firm. The audit's scope will be governed by the Financial Management Guidelines (document OP-273-12) and the Guide for Financial Reports and Management of External Audit. Audit costs will be financed with program resources. For audit purposes, the Haitian fiscal year will be used (October 1st to September 30th).

III. Agreements and Requirements for Procurement Execution

<input checked="" type="checkbox"/>	Bidding Documents	For procurement of Works, Goods and Services Different of Consulting executed in accordance with the Procurement Policies (document GN-2349-15), subject to ICB, the Bank's Standard Bidding Documents (SBDs) or those agreed between EA and the Bank will be used. Likewise, the selection and contracting of Consulting
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		Services will be done in accordance with the Policies for the Selection and Contracting of Consultants (document GN-2350-15) and the Standard Request for Proposals (SRP) issued by the Bank or agreed between the EA and the Bank will be used for the particular selection. The revision of the technical specifications, as well as the terms of reference of the procurements during the preparation of selection processes, is the responsibility of the sectorial specialist of the project. This technical review can be ex-ante and is independent of the procurement review method.
<input checked="" type="checkbox"/>	Alternative Procurement Arrangements	In compliance with policy GN-2350-15; Clause 1.10, the international specialized agencies UNOPS and FAO will be contracted by direct agreement under this program. The negotiated contract template with UNOPS presented in OEL#22 will be used for this process.
<input checked="" type="checkbox"/>	Direct Contracting and Single Source Selection	<p>The following direct contracting and single-source selections are identified:</p> <ol style="list-style-type: none"> 1. UNOPS: due to MARNDR's lack of necessary resources to execute Component 3, the United Nations Office for Project Services (UNOPS) will be hired as a specialized agency responsible for coordinating the executions of works, purchasing materials, and hiring labour for the execution of rural road works. The direct contracting of UNOPS is justified under GN-2350-15 (d) as only one firm is qualified or has experience of exceptional worth for the assignment, considering its renowned experience on similar projects in Haiti and other parts of the world. UNOPS may execute the component in conformity with IDB's procurement policies. In Haiti, UNOPS' engagement in IDB-financed projects has been one of the most important in the region in the past 10 years, totalling nine collaborations. Two of these included UNOPS' participation in road construction, repair, and stabilization, by promoting a labour-intensive approach to contribute to the revival of the local economy and the improvement of the living conditions of local populations. UNOPS has an exceptional experience in the implementation of infrastructures through mobilization of local labour for the implementation of works in Haiti. 2. FAO: to support the MARNDR in the implementation of Farmers' Field Schools and Business Schools (Component 1 product 6 – GAFSP financed), The Food and Agriculture Organization (FAO) will be hired for consultancy and technical assistance. The direct contracting is justified under GN-2350-15 (d), which applies when only one firm is qualified or has experience of exceptional worth for the assignment. FAO has developed this unique methodology in the world and in Haiti focusing on building rural communities' capacity to analyse the production cycle and identify main constraints, as well as to test possible solutions. In this way, farmers can become more productive, profitable, and better respond to changing market and climatic conditions.
<input checked="" type="checkbox"/>	Recurrent Expenses	The recurrent expenses required to put the project into operation approved by the Project Team Leader will be made following the executing agency's administrative procedures. Such procedures will be reviewed and accepted by the Bank, provided that they do not violate the principles of value for money, economy, efficiency, equality, transparency and integrity. Guidelines for the

		treatment of recurring expenses, GN 2331-5 Expense Eligibility Policy and updates will be used as guidance.
<input checked="" type="checkbox"/>	Procurement supervision	Ex ante or ex post: As agreed in the project procurement plan. Thresholds by Country: www.iadb.org/procurement

Main Acquisitions

Description of the procurement	Selection Method	New Procedures/Tools	Estimated Date	Estimated Amount 000'US\$
Goods				
Fishing Boat's Engines	International Competitive Bidding	Undefined	January 2022	\$ 764,000
Fishing Boats including fridges and accessories	International Competitive Bidding	Undefined	January 2022	\$ 1,029,650
Works				
Building of Loading Wharfs	International Competitive Bidding	Undefined	October 2022	\$ 600,000
Building of Fisher's Market	International Competitive Bidding	Undefined	March 2022	\$ 900,000
Consulting Firms				
Management and Coordination of Rural Road's Rehabilitation	Direct Contracting	Undefined	March 2022	\$ 20,597,106
Technical Assistance and Operators (4 zones)	Quality Based Selection	Undefined	November 2021	\$ 22,873,600

Description of the procurement	Selection Method	New Procedures/Tools	Estimated Date	Estimated Amount 000'US\$
Rural Roads Technical Assistance and Supervision (DIA)	Quality and Cost Based Selection	Undefined	December 2021	\$ 3,302,315
MARNDR's Capacity Reinforcement Study + Demonstration Plot Study	Quality Based Selection	Undefined	December 2021	\$ 2,194,445
Implementation Farmer's Field and Business Schools	Direct Contracting	Undefined	March 2022	\$ 1,812,417

To access to the Procurement Plan click [here](#).

IV. Agreements and Requirements for Financial Management

<input checked="" type="checkbox"/>	Programming and Budget	The CGF will consolidate financial reports stemming from the different technical directorates and prepare annually an Annual Operation Plan (AOP), a procurement plan (PP) and a twelve-month detailed financial plan (FP) which will include cash flow needs based on activities identified in the AOP and PP. The financial plan will respect the budget lines defined in the grant agreement. The execution of the project's financial plan will be evaluated every six months and reported in the semi-annual Project Monitoring Report.
<input checked="" type="checkbox"/>	Treasury and Disbursement Management	<p>Funds will be deposited in project designated USD accounts opened at BRH by IDB and transferred to project designated local currency account as needed by Executing Unit for the payment of expenses in HTG.</p> <p>Financial management will be guided by OP-273-12. Disbursement will be made by direct payment and advance of funds methodology for the financing of activities derived from annual operating and procurement plans. Each technical directorate will be responsible for executing the activities and paying firms and service providers based on advancement of works/services rendered according to the payment terms defined in contracts signed with the MARNDR and procedures defined in project operating manual. For advance of funds, financial plans will be submitted for the component executed by the PITAG team for 6-month periods; for components executed by the Fisheries-PDPA team and the DIA, advance of funds will be for 3-month periods. Disbursement supervision will be ex-post, however the Bank may review a percentage of supporting documentation prior to the processing of the justification of advances of funds that will be submitted to the Bank monthly, within 20 days after the end of each month. For each new advance, due to the large geographic dispersion and activities to be carried out, each technical directorate will need to justify 60% of cumulated advance received to facilitate the financial flow of funds and the pace of disbursement.</p>

		For payment to UNOPS for the execution of works and related activities under Component 3 payment will be made according to: (i) established disbursement mechanism agreed with DIA and the payment terms defined in the contracts signed with MARNDR; (ii) submission of technical and financial progress reports validated by an independent supervision firm and approved by the DIA.
<input checked="" type="checkbox"/>	Accounting, information systems and reporting	ACCPAC and SYSCOMPTE software system will be used for the financial administration of the project and will generate financial reports according to the chart of accounts and investment components approved for the project. Modified cash basis will be used for accounting purposes and the International Financial Reporting Standards will be followed when applicable, in accordance with the established national criteria. Financial reports will be presented in USD.
<input checked="" type="checkbox"/>	External control: external financial audit and project reports	The external audit of the Project will be carried out by an independent auditing firm eligible to audit operations financed by the Bank, selected, and contracted in accordance with the terms of reference and model contract previously agreed with the Bank.
<input checked="" type="checkbox"/>	Project Financial Supervision	Financial supervision will be conducted monthly on an EX-Post basis and will consider on-site Inspection visits and “desk” reviews, as well as the analysis and follow-up of the results and recommendations of the audits of the financial reports, the review of justification of advances and the reconciliation of project accounts.

RURAL PRODUCTIVITY AND CONNECTIVITY PROGRAM WITH A TERRITORIAL APPROACH

HA-G1050

CERTIFICATION

The Grants and Co-Financing Management Unit (ORP/GCM) certifies that the referenced operation will be financed through:

Funding Source	Fund Code	Currency	Amount Up to
Global Agriculture & Food Security Program Trust Fund	GAF	USD	18,300,000

For operations financed by funds where the Inter-American Development Bank (IDB) does not control liquidity, the availability of resources is contingent upon the request and the receipt of the resources from the donors. Additionally, in case of operations financed by funds that require a post-approval agreement with the donor, the availability of resources is contingent upon the signature of the agreement between the Donor and the IDB. (i.e.: Project Specific Grants (PSG), Financial Intermediary Funds (FIF), and single donor trust funds).

Certified by:

(Original Signed)

08/Nov/21

Maria Fernanda García

Date

Chief

Grants and Co-Financing Management Unit

ORP/GCM

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/21

Haiti. Nonreimbursable Financing ___/GR-HA to the Republic of Haiti
Rural Productivity and Connectivity Program
with a Territorial Approach

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, as Administrator of the IDB Grant Facility (hereinafter referred to as the "Account"), to enter into such contract or contracts as may be necessary with the Republic of Haiti, as beneficiary, for the purpose of granting it a nonreimbursable financing to cooperate in the execution of the Rural Productivity and Connectivity Program with a Territorial Approach. Such nonreimbursable financing will be for an amount of up to US\$60,000,000, which form part of the Account, and will be subject to the Terms and Financial Conditions and the Special Contractual Conditions in the Project Summary of the Grant Proposal.

(Adopted on ____ 2021)

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/21

Haiti. Nonreimbursable Financing GRT/GA-____-HA to the Republic of Haiti
Rural Productivity and Connectivity Program with a Territorial Approach

The Board of Executive Directors

RESOLVES:

1. That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, as Administrator of the Global Agriculture and Food Security Program (GAFSP) Trust Fund (hereinafter referred to as the "Trust Fund"), to enter into such agreement or agreements as may be necessary with the Republic of Haiti, as beneficiary, for the purpose of granting it a nonreimbursable financing to cooperate in the execution of the Rural Productivity and Connectivity Program with a Territorial Approach. Such nonreimbursable financing will be for an amount of up to US\$18,300,000, which form part of the Trust Fund, and will be subject to the Terms and Financial Conditions and the Special Contractual Conditions in the Project Summary of the Grant Proposal.

2. That the authorization granted in paragraph 1 above shall be effective only once the Bank has entered into the specific contribution agreements.

(Adopted on _____ 2021)