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Report No: PAD2717

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF
SDR 3.5 MILLION
(US$5 MILLION EQUIVALENT)

AND ON A

PROPOSED GRANT

FROM THE CRISIS RESPONSE WINDOW RESOURCES

IN THE AMOUNT OF
SDR 13.9 MILLION
(US$20 MILLION EQUIVALENT)

TO THE

COMMONWEALTH OF DOMINICA

FOR AN

EMERGENCY AGRICULTURAL LIVELIHOODS AND CLIMATE RESILIENCE PROJECT
March 30, 2018

Agriculture Global Practice
Latin America And Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective February 28, 2018)

Currency Unit =	East Caribbean Dollar (EC$)
EC$2.7 =	US$1
US$1.4459 =	SDR 1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

APO	Agriculture Producers Organization
ARAP	Abbreviated Resettlement Action Plan
CARICOM	Caribbean Community
CBA	Cost-Benefit Analysis
CER	Contingency Emergency Response
CERC	Contingency Emergency Response Component
CLF	Central Livestock Farm
CREAD	Climate Resilient Execution Agency for Dominica
CRW	Crisis Response Window
DA	Designated Account
DVRP	Disaster Vulnerability Reduction Project
EFA	Economic and Financial Analysis
EHS	Environmental, Health, and Safety
ERR	Economic Rate of Return
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EX-ACT	Ex-Ante Carbon-Balance Tool
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School
FM	Financial Management
FPIC	Free, Prior Informed Consent
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GoCD	Government of Commonwealth of Dominica
GRM	Grievance Redress Mechanism
HCP	Higher Carbon Price
IFMIS	Integrated Financial Management Information System
IFR	Interim Financial Report
IPF	Investment Project Financing
IPP	Indigenous Peoples Plan

ISM	Implementation Support Mission
IST	Implementation Support Team
LCP	Lower Carbon Price
M&E	Monitoring and Evaluation
MAF	Ministry of Agriculture and Fisheries
MIS	Management Information System
MoF	Ministry of Finance
NPV	Net Present Value
OECS	Organisation of Eastern Caribbean States
PDO	Project Development Objective
PDNA	Post-Disaster Needs Assessment
PIU	Project Implementation Unit
POM	Project Operations Manual
PPSD	Project Procurement Strategy for Development
PSAF	Permanent Secretary for Agriculture and Fisheries
PSC	Project Steering Committee
RPS	Regional Partnership Strategy
SAP	Safeguard Action Plan
SDG	Sustainable Development Goal
ToR	Terms of Reference

Regional Vice President: Jorge Familiar

Country Director: Tahseen Sayed Khan

Senior Global Practice Director: Juergen Voegele

Practice Manager: Preeti S. Ahuja

Task Team Leaders: Bayarsaikhan Tumurdavaa, Francisco Javier Obreque Arqueros

BASIC INFORMATION

Is this a regionally tagged project?	Country(ies)	Financing Instrument
No		Investment Project Financing

[✓] Situations of Urgent Need of Assistance or Capacity Constraints

[ ] Financial Intermediaries

[ ] Series of Projects

Approval Date	Closing Date	Environmental Assessment Category
13-Apr-2018	30-Jun-2023	B - Partial Assessment

Bank/IFC Collaboration
No

Proposed Development Objective(s)

The Project Development Objective (PDO) is to contribute to restoring agricultural livelihoods and enhancing climate resilience of farmers and fisherfolk affected by Hurricane Maria in Dominica.

Components

Component Name	Cost (US$, millions)
Restoration of the Productive Base for the Recovery of Agricultural Livelihoods	16.50
Restoration of Key Productive Infrastructure and Institutional Strengthening	10.60
Project Management and Coordination	2.40
Contingency Emergency Response	0.00

Organizations

Borrower : Ministry of Finance

Implementing Agency : Ministry of Agriculture and Fisheries

Safeguards Deferral

Will the review of safeguards be deferred?

[✓] Yes [ ] No

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	29.50
Total Financing	29.50
Financing Gap	0.00

DETAILS

Counterpart Funding	4.50
Borrower	2.90
LOCAL: BENEFICIARIES	1.60
International Development Association (IDA)	25.00
IDA Credit	5.00
IDA Grant	20.00

Expected Disbursements (in US$, millions)

Fiscal Year	2018	2019	2020	2021	2022	2023
Annual	0.15	6.50	6.50	5.00	4.00	2.85
Cumulative	0.15	6.65	13.15	18.15	22.15	25.00

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture

Contributing Practice Areas

Environment & Natural Resources

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	High
2. Macroeconomic	High
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	High
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	Substantial
9. Other	High

10. Overall	● High

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[✓] Yes [ ] No

Have these been approved by Bank management?

[✓] Yes [ ] No

Is approval for any policy waiver sought from the Board?

[✓] Yes [ ] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36	✓	
Pest Management OP 4.09	✓	
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10	✓	
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

Schedule 2; Section I. A.1. of the Financing Agreement: The Recipient shall operate and maintain, throughout Project implementation, a Project Implementation Unit (PIU) under the administrative authority of MAF to be responsible for the overall implementation, management, monitoring and evaluation of the Project with qualified

and experienced staff in sufficient numbers, as well as with adequate funds, facilities, services and other resources acceptable to the Association, as further detailed in the Project Operational Manual.

Sections and Description

Schedule 2; Section I.A.2 (a). of the Financing Agreement: Not later than three months after the Effective Date, the Recipient shall establish and thereafter operate and maintain in form and substance satisfactory to the Association, as further detailed in the Project Operational Manual and throughout Project implementation, a Project Steering Committee to be co-chaired by the Recipient's Financial Secretary, and with representatives from relevant ministries, to be in charge of the overall strategic guidance and oversight of the Project;

Sections and Description

Schedule 2; Section I.A.2 (b). of the Financing Agreement: Not later than three months after the Effective Date, the Recipient shall:

(i) establish and thereafter operate and maintain in form and substance satisfactory to the Association, as further detailed in the Project Operational Manual and throughout Project implementation, the Implementation Support Team under the authority of MOF to provide fiduciary and quality assurance assistance for the Project; and

(ii) employ staff and consultants with qualifications and terms of reference acceptable to the Association.

Sections and Description

Schedule 2; Section I.B.1. of the Financing Agreement: The Recipient shall not later than two months after the Effective Date adopt and publish the Project Operational Manual, in form and substance satisfactory to the Association, and thereafter carry out the Project, and/or cause the Project to be carried out, in accordance with said Project Operational Manual, which consists of different schedules setting forth, respectively, rules, methods, guidelines, specific development plans, standard documents, and procedures for the carrying out of the Project.

Sections and Description

Schedule 2; Section I.D.1. of the Financing Agreement: The Recipient shall provide Grants to Eligible Beneficiaries for the implementation of Activities under Parts A.1 and A.2 of the Project in accordance with eligibility criteria and procedures satisfactory to the Association and specified in the Project Operational Manual.

Sections and Description

Schedule 2; Section I.D.2. of the Financing Agreement: Prior to initiating any activity under Parts A.1 and A.2 of the Project, the Recipient shall:

(a) enter into an agreement with the Eligible Beneficiary, in terms substantially similar to those in the model form of Beneficiary Agreement set forth in the Project Operational Manual, and in terms and conditions acceptable to the Association; and

(b) exercise its rights and carry out its obligations under each Beneficiary Agreement in such manner as to protect the interest of the Recipient and the Association and to accomplish the objectives of the Project. Except as the Association shall otherwise agree, the Recipient, shall not assign, amend, abrogate, terminate of waive or fail to

enforce any Beneficiary Grant Agreement or any of its provisions.

Sections and Description
Schedule 2; Section III. B. 3. of the Financing Agreement: No withdrawal shall be made for payments under Category (3), for Emergency Expenditures under Part D of the Project, unless and until the Association is satisfied, and has notified the Recipient of its satisfaction, that all of theconditions specified in the FA have been met in respect of said activities.

Sections and Description
Schedule 2; Section IV. 1. of the Financing Agreement: The Recipient shall not later than 120 days after the Effective Date furnish to the Association a final version of the Procurement Plan and the PPSD, satisfactory to the Association.

Sections and Description
Schedule 2; Section IV.2 (a). of the Financing Agreement: Not later than six weeks after the Effective Date recruit in a manner acceptable to the Association, consultants to prepare the Safeguard Documents with qualifications and terms of reference acceptable to the Association.

Sections and Description
Schedule 2; Section IV.2 (b). of the Financing Agreement: Not later than three months after the Effective Date, furnish to the Association the first draft of said Safeguard Documents including the Grievance Redress Mechanism.

Sections and Description
Schedule 2; Section IV.2 (c). of the Financing Agreement: Not later than four months after the Effective Date, finalize, adopt and publish the Safeguard Documents, all in form and substance satisfactory to the Association.

Sections and Description
Schedule 2; Section IV.3. of the Financing Agreement: The Recipient shall, not later than six months after the Effective Date, recruit engineering consultants, with qualifications and under terms of reference satisfactory to the Association, to prepare an inventory of public agricultural sector infrastructure under MAF that was damaged by Hurricane Maria and prepare final engineering designs and bidding documents for the reconstruction.

Sections and Description
Schedule 2; Section IV.4 of the Financing Agreement: The Recipient shall not later than six months after the Effective Date, develop and start implementing a comprehensive Management and Information System, satisfactory to the Association, for the monitoring and evaluation of the Project (including the system for identification and verification of Project beneficiaries).

Conditions

Type	Description
Effectiveness	The Recipient has established the Project Implementation Unit (PIU) within MAF in form and substance satisfactory to the Association [FA; Article IV (a)].
Effectiveness	The Recipient has appointed a Project Manager to head the Project Implementation Unit (PIU) in a manner satisfactory to the Association, with qualifications and under terms of reference satisfactory to the Association [FA; Article IV (b)].
Effectiveness	The Recipient has prepared and submitted to the Association for its review a draft Project Operational Manual satisfactory to the Association [FA; Article IV (c)].
Disbursement	Schedule 2, Section III. B.2. No disbursements should be made for payments under Category 2 of the IDA credit/grant unless: (i) the Association has received satisfactory evidence that the Recipient has adopted the Safeguard Documents in form and substance satisfactory to the Association; (ii) the Association has received satisfactory evidence that the first public announcement for the Beneficiaries to participate in the Activities under Parts A.1 and A.2 has been made; and (iii) the Association has received satisfactory evidence that key staff has been employed in the PIU in accordance with the Project Operational Manual and in form and substance satisfactory to the Association.
Disbursement	Schedule 2; Section III. B.1. No withdrawal shall be made for payments made prior to the Signature Date, except that withdrawals up to an aggregate amount not to exceed US$800,000 equivalent from the Grant and US$200,000 equivalent from the Credit may be made for Eligible Expenditures under Category (1) for payments made after March 23, 2018.

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Bayarsaikhan Tumurdavaa	Team Leader(ADM Responsible)	Agriculture	GFA04

Francisco Javier Obreque Arqueros	Team Leader	Agriculture Livelihood	GFA04
Sonia Cristina Rodrigues Da Fonseca	Procurement Specialist(ADM Responsible)	Procurement	GGOPL
Eduardo Franca De Souza	Financial Management Specialist	Financial Management	GGOLF
Aira Maria Htenas	Team Member	Livelihood Nutrition	GFAGE
Gibwa A. Kajubi	Social Safeguards Specialist	Social Development	GSU04
Guzman P. Garcia-Rivero	Team Member	Operations Adviser	GFA04
Isabella Micali Drossos	Counsel	Lawyer	LEGLE
Mario I. Mendez	Team Member	Program Management	GFA04
Ramon Ernesto Arias Moncada	Team Member	Agribusiness	GFA04
Randall Brummett	Team Member	Fisheries	GENGE
Robert Johnston Griffin	Team Member	Climate Resilience	GCCFM
Sylvia Michele Diez	Team Member	Environment/Forestry	GEN04
Ximena Rosio Herbas Ramirez	Environmental Safeguards Specialist	Environment	GEN04

Extended Team

Name	Title	Organization	Location
Marimuthu Swaminathan	Livestock Specialist	FAO	India
Mario Castejon	Agr. Economist	FAO	Panama City,Panama
Steven Watkins	Agricultural Value Chain Specialist	FAO	Rome,Italy
Yerania Sanchez	Economist	FAO	Panama City,Panama

Dominica

Emergency Agricultural Livelihoods and Climate Resilience Project

TABLE OF CONTENTS

I. STRATEGIC CONTEXT

A. Country Context

1. **The Commonwealth of Dominica is a small upper-middle-income country in the Caribbean Sea, with a population of 73,543.**[1] With a gross domestic product (GDP) of US$581.48 million,[2] Dominica's economy depends predominantly on agriculture and tourism. Poverty remains a pervasive development issue, with a poverty headcount of 28.8 percent at the time of the last Country Poverty Assessment (CPA) conducted in 2009.[3] Dominica is affected by fiscal sustainability challenges, with public debt levels as high as over 82.7 percent of GDP,[4] because of the country's exposure to natural disasters and external shocks.

2. **Dominica is particularly vulnerable to natural disasters from meteorological and geophysical events.** Due to its location within the Atlantic hurricane belt, high-intensity weather events such as high winds, excess rainfall, and hurricanes, continue to have adverse effects on vulnerable populations and the productive sectors of the country's economy. Moreover, the island's mountainous, rugged landscape creates significant engineering challenges to reducing infrastructure vulnerability to natural disasters and climate change. The steep topographic conditions and rugged interior mean that human settlements and physical development are concentrated along narrow coastal areas (particularly in the south and west), with almost 62 percent of the island's population living along the coast.

3. **Recurrent meteorological events have significantly affected the country's economic and fiscal stability as well as the population's socioeconomic well-being.** Average annual losses from weather-related events between 1996 and 2015 are estimated at 7.9 percent of GDP, making Dominica the second most affected country globally in terms of average GDP loss during this time. Tropical Storm Erika (2015) severely damaged the country's transportation, housing, and agriculture sectors, with losses of about 90 percent of Dominica's GDP.[5] Fiscal losses arising from these events and the ongoing challenges of climate change, threaten to set back hard-earned development gains and restrain economic growth. As a result, the Government of the Commonwealth of Dominica (GoCD) has made disaster risk management and climate change adaptation its utmost priorities.

B. Situation in Urgent Need of Assistance

4. **Hurricane Maria hit the island of Dominica on September 18, 2017, with catastrophic effects.** Hurricane Maria made landfall as a Category 5 storm (Saffir-Simpson scale), with winds exceeding 170 miles per hour (mph). Hurricane Maria was one of the most rapidly intensifying storms in recent memory, strengthening from a Category 2 to Category 5 hurricane in less than 12 hours. According to official sources, 30 persons lost their lives and 34 persons were declared missing.[6] The Prime Minister declared a State of Emergency on September 20, 2017.

[1] World Bank, World Development Indicators. Statistics are for 2016 (latest available).
[2] Dominica | Drupal. https://www.gfdrr.org/dominica.
[3] Kairi Consultants Ltd. *Country Poverty Assessment: Dominica*. 2010, http://www.caribank.org/uploads/publications-reports/economics-statistics/country-poverty-assessment-reports/Dominica+CPA+-+Main+Report+Final+%28Submitted%29.pdf.
[4] International Monetary Fund (IMF) World Economic Outlook and World Bank staff calculations. Public sector debt includes estimated commitments under the Petrocaribe arrangement with Venezuela.
[5] Dominica | Drupal. *https://www.gfdrr.org/dominica*.
[6] Information as of November 8, 2017.

5. **The Post-Disaster Needs Assessment (PDNA) estimated total damages at EC$2.51 billion (US$931 million) and losses of EC$1.03 billion (US$382 million), which amounts to 226 percent of 2016 GDP.** The housing sector (38 percent), the transport sector (20 percent), and the education sector (7 percent) sustained most damages. The agriculture sector (33 percent), tourism (19 percent), and the transport sector (14 percent) saw the largest losses as defined by changes in economic flow. The hurricane also caused widespread damage to the power grid. Electricity services failed with at least 75 percent of the network down due to the widespread damages to transmission and distribution networks. Most of the gains from recovery efforts after Hurricane Erika (2015) have been reversed and the identified recovery needs incorporating the principle of 'building back better' are estimated at US$1.37 billion.

6. **The agriculture and fisheries sectors were among the most affected sectors and experienced high damages and losses, severely affecting the livelihoods of the predominantly small-scale farming community.** An estimated 80–100 percent of root crops, vegetables, bananas, and plantains and 90 percent of tree crops were damaged. Livestock losses are estimated to be 45 percent of cattle, 50 percent of small ruminants, 65 percent of pigs, and 90 percent of chicken stocks. Together with damages to farm buildings and equipment, the crop and livestock sectors had a total loss estimated at US$179.6 million. The fisheries sector was also heavily affected, where it is estimated that about 370 vessels were damaged or destroyed, as well as much of the fishing gear and engines. Overall, the situation is expected to dramatically affect crop and livestock production in the next several years, particularly vegetable, tree crop, poultry, and pork production, which would seriously threaten people's livelihoods as well as food and nutrition security. The hurricane defoliated almost all trees and totally uprooted an estimated 10-20 percent of tress, and severely damaged the entire infrastructure of the Forestry Department (forestry and national parks buildings, nurseries, trail infrastructure). See estimated losses in table 1.

Table 1. Estimates of Damages and Needs

Productive Sector	Damages and Losses (US$, millions)	Urgent Needs (US$, millions)
Crops and Livestock	179.6	88.5
Fisheries	5.3	2.5
Forestry	29.7	14.9
Total	**214.6**	**105.9**

Source: PDNA.

7. The Project builds on World Bank immediate response activities and post-disaster support following Hurricane Maria. Shortly after Hurricane Maria, the Contingency Emergency Response Component (CERC) of the ongoing World Bank-supported (US$38 million) Disaster Vulnerability Reduction Project (DVRP) was triggered, channeling US$10 million to unconditional cash transfer programs to provide immediate support to commercial and small farmers and aid in the recovery of small and microenterprises. The Emergency Agricultural Livelihoods and Climate Resilience Project complements the role of partners in addressing the first phase of agricultural sector's recovery and leverages the World Bank's global experiences in post-disaster recovery and reconstruction in the Caribbean (for example, Haiti, Grenada), as well as post-hurricane emergency recovery loans in small island states.

8. **The Project would form part of a broader World Bank Group support to the medium and long-term recovery effort in Dominica**, which would also include a proposed Housing Recovery Project (P166537) and a proposed Additional Financing for the Disaster Vulnerability Reduction Project (P166540). The World Bank's investments in agriculture, housing, and infrastructure were informed by the outcomes of

the PDNA led by the World Bank. This overall program of support complements and aligns with other development partner initiatives and fills critical gaps.

9. **Based on the urgent need for assistance, the proposed operation meets the requirements of the World Bank Operations Manual, as stated in paragraph 12 of the Bank Policy on Investment Project Financing on "Projects in Situations of Urgent Need of Assistance or Capacity Constraints".** The additional flexibility as defined in paragraph 12 and condensed procedures for preparation will help contribute to the timely restoration of agricultural livelihoods.

Policy Waiver

10. **In light of Dominica's situation of urgent need following Hurricane Maria, this Project document seeks the approval of Executive Directors to provide IDA resources from the CRW (SDR 13.9 million, US$20 million equivalent) for this Project in the form of all grants, rather than on Dominica's current IDA terms.** Dominica is only eligible for credits in FY18 under its regular allocation and under any CRW allocation[7]. The provision of financing in the form of grants through the CRW for this Project is appropriate, as the provision of credits would further heighten Dominica's risk of debt distress at a time of urgent need, following estimated damages and losses of 226% of GDP.

C. Sectoral and Institutional Context

11. **The agriculture sector plays a critical role in Dominica's economy, contributing 19[8] percent to the country's GDP and employing around 25–40 percent of the workforce[9].** The sector has always been and continues to be very important for Dominica, determining food and nutritional security outcomes and representing a key driver of economic activity.

12. **Although, crop production dominates the agriculture sector (it contributed 86 percent to total agriculture production in 2015), diversification of produce is increasingly characterizing the sector.** Main crops are plantain, coconut, grapefruit, lime, orange, mango, avocado, papaya, and hot pepper. Root crops such as tannia,[10] dasheen, and yam have also gained in prominence, although primarily at a regional level with lower quantities exported. Livestock production contributed 7.8 percent to total agriculture production in 2015. Egg production is considered the most important livestock activity in the country, followed by raising pigs and small ruminants.

13. **The fisheries sector also plays a crucial social and cultural role in Dominica**. **At present, although characterized as artisanal, the fisheries sector comprises around 440 small fishing vessels.** Overall, the fisheries sector employs approximately 2,200 people, and a total of 7,100 persons depend on the sector for their livelihoods. The total forest area on the island is 47,580 ha, of which 80 percent is controlled by the Government and only around 9,552 ha are classified as usable forest estate. The main value of the forest in Dominica lies in ecotourism and environmental services for the provision of water and erosion control.

[7] Under the CRW's implementation framework for IDA18, the terms of assistance for CRW financing are identical to those under which regular IDA assistance is provided to a particular country.
[8] Source: World Development Indicators (WDI)
[9] Source: World Bank Sector Notes for Dominica and the report of UN Office for the Coordination of Humanitarian Affairs for Dominica, 2017.
[10] *Xanthosoma Sagittifolium,* also known in the region as taro or malanga.

14. **Agricultural production continues to be severely constrained in Dominica due to small farm sizes and limited arable land.** In addition, a continuous concern is the low level of farm productivity, primarily caused by a lack of mechanization, limited technical knowledge, and poor irrigation. Labor availability is another increasing constraint for small-scale farmers, mostly due to urban migration and the low level of incomes associated with farming. Overall, the sector lacks adequate financing and adequate farm infrastructure and is characterized by a very fragmented and unorganized private sector. Women represent about 20 percent of total farmers and are primarily engaged in producing tuber and root crops and vegetables for both food self-sufficiency and local markets. Most of them head single-parent households and, hence, are highly vulnerable.

15. **Immediate recovery requires extensive involvement of the Government, which entitles significant strengthening of institutional capacity of the public sector (mainly in the Ministry of Agriculture and Fisheries [MAF]) over the medium term.** The longer-term rehabilitation efforts should have strong market-based elements to ensure the sustainability of efforts. Public-private partnerships in new agricultural investments should be promoted to stimulate the local economy and create employment while building greater resilience against market, production, and climate change variability into the system. Also, there are emerging new agricultural technologies and practices available regionally and globally considered essential to enhancing climate resilience and productivity, which need to be gradually introduced by additional investments and with the help of regional and global agriculture research organizations.

16. **The extreme weather impacts in Dominica are likely to be exacerbated in the future because of continuous climate change.** This assessment is primarily because of: (a) it is a small island with low-lying coastline; (b) it is in an area prone to frequent natural disasters, especially hurricanes. The major risks posed by climate change are:

(a) **Increasing intensity of hurricanes and tropical storms.** Climate models are predicting hurricanes and storms impacting the Caribbean region as becoming more intense in the future, which can significantly damage infrastructure throughout the country, because of a variety of resulting factors including high winds, storm surges, rising sea levels and inundation. This includes damages to infrastructure such as ports, storage depots, roads that facilitate the supply of input and products, as well as constrained access to critical facilities and potential land degradation and loss of land.

(b) **Future climate scenarios of increased unpredictability.** More frequent heat waves and droughts, together with unpredictable rain patterns, could threaten Dominica's dominant economic sectors, including agricultural sector's production. These possible weather patterns could affect the types of crops to be grown and already unstable areas will experience a greater risk with the frequent occurrence of landslides and flooding, requiring the introduction of new land and water management tools to avoid threats to national food security.

(c) **Disaster risk management**. Vulnerability assessments, hazard mapping, disaster risk management and adaptation measures, together with improvements to be introduced to the country's meteorological services, need to be better implemented to address these risks. Improved coordination and collaboration between community disaster organizations are also needed, including preparedness and response and mitigation capacity among public, private, and civil sector entities for local level management and response.

17. T**he Prime Minister of Dominica declared that reviving and rebuilding the agriculture and food sector is a key priority of the Government of the Commonwealth of Dominica (GoCD), given its essential roles in food and nutrition security, employment, and income generation, especially for the poor and vulnerable rural population.** While the consequences of the hurricane are devastating, they also create an opportunity to rebuild a more climate-resilient and competitive agriculture and food system.

D. Higher Level Objectives to which the Project Contributes

18. **The Project directly supports the implementation of Dominica's National Agricultural Policy and Action Plan 2016–2025 that has identified the need for, inter alia, agricultural development, including a more modernized agriculture sector, increased farm productivity, and overall climate resilience of the country's agriculture and food systems.** By enhancing the climate-resilience feature of agriculture, the Project contributes to the country's Low-Carbon Climate-Resilient Development Strategy 2012–2020 that serves as the programmatic nexus for capturing conventional and innovative sources of financing and facilitates Dominica's transition to a climate-resilient economy.

19. **On March 9, 2018 the Government established the Climate Resilient Execution Agency for Dominica (CREAD), which will help rebuild Dominica as the first climate-resilient nation.** The mission of the agency is to coordinate all reconstruction work to avoid duplication, maximize economies of scale, spot and fill critical gaps, and ensure that all reconstruction activities are focused on a single Climate Resilient Recovery Plan developed by Dominica and its partners. The current implementation arrangements to be supported by the World Bank-financed projects, using Project Implementation Units (PIUs) and the Implementation Support Team (IST) for the three post-Hurricane Maria projects have been designed to be flexible and in harmony with the CREAD, while mobilizing a combination of national and international staff to advance implementation while the CREAD recruitment and operationalization is being finalized. The IST support will be cost shared across the World Bank portfolio of investment projects and will work closely with CREAD on the coordination of reconstruction efforts.

20. **The Project is well positioned to contribute to Dominica's Nationally Determined Contribution, which includes the promotion of food security through climate-resilient agricultural and fisheries development, among its key priorities for building climate resilience.** Benefiting from sound management practices, Dominica forests will continue to sequester national GHG emissions on an annual basis during the period 2020 to 2030. The Project also contributes to the attainment of 3 of the 17 Sustainable Development Goals (SDGs): (a) SDG1 on ending poverty in all its forms; (b) SDG2 on ending hunger, achieving food security and improving nutrition, and promoting sustainable agriculture; and (c) SDG13 combating climate change and its impacts.

21. **Furthermore, the Project is aligned with the World Bank Group's FY2015–19 OECS Regional Partnership Strategy (RPS)**[11]. The RPS aims at fostering sustainable and inclusive growth in three key areas: (a) competitiveness, (b) public sector modernization, and (c) resilience. The Project directly contributes to areas (a) and (c) by supporting the immediate recovery of the crop, livestock, forestry and fisheries sectors and by promoting climate-resilient agriculture and strengthening agribusiness capabilities.

[11] Document ID No. 85156-LAC dated October 17, 2014.

22. **The Project will contribute directly toward the achievement of the World Bank Group's Twin Goals of ending poverty and promoting shared prosperity.** The Project will support the restoration of agricultural livelihoods especially of the vulnerable smallholder farmers and fisherfolk, as well as toward enhancing climate resilience in the agriculture sector that can sustain developmental achievements over time. Finally, the Project is also aligned with the World Bank Group's Climate Change Action Plan's top-level priority of Scaling Up Climate Action, with its focus on the high-impact area of climate-smart land use and food security.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

23. The Project Development Objective (PDO) is to contribute to restoring agricultural livelihoods and enhancing climate resilience of farmers and fisherfolk affected by Hurricane Maria in Dominica.

B. Project Beneficiaries

24. The direct beneficiaries of the Project are crop and livestock farmers, fisherfolk, and producer organizations affected by Hurricane Maria in all ten parishes of Dominica. An estimated 4,900 individual farmers and fisherfolk are expected to benefit directly from the Project. At least 20 percent of the beneficiaries will be rural women, most of whom head single-parent households and are one of the population groups[12] that have been most affected by the hurricane. Technical and managerial staff of MAF and other participating organizations will benefit from the Project through training and capacity-building activities in climate resilience and agribusiness.

C. PDO-Level Results Indicators

25. The key results indicators to assess project outcomes are the following:
    (a) Farmers and fisherfolk reached with productive assets and services (of which female beneficiaries)
    (b) Crop area restored (including high-value crops)
    (c) Farmers adopting improved agricultural technologies (including climate resilience) (including female beneficiaries).

III. PROJECT DESCRIPTION

A. Project Components

Component A: Restoration of the Productive Base for the Recovery of Agricultural Livelihoods (Total cost: US$16.5 million)

Subcomponent A.1: Restoration of Cropping Systems (Total cost: US$9.3 million)

26. This subcomponent will provide support in recovery of the production capacity of small- and medium-size crop farmers,[13] as well as commercially oriented farmers[14] integrated in value chains and

[12] According to the PDNA, women represent 39 percent of the heads of households in Dominica and about 20 percent of the total number of farmers. Nearly 76 percent of the women farmers interviewed reported that they were significantly affected by the severe loss of tools and crops. The report underscores the recovery needs of single-parent families headed by women.
[13] For simplicity, the farm size is defined in the total land occupied (either owned or rented). Small farmers: up to 0.8 ha (2 acres); medium-size farmers: up to 2.02 ha (5 acres).
[14] Mostly commercial farmers have an area between 2 ha and 10 ha (5 to 25 acres), are competitive in producing higher-value

help in the gradual restoration of their livelihoods and in retaining their market shares, through provision of (a) an essential package of inputs (mainly improved quality seeds and fertilizers), tools, and materials for the replanting or restoration of crops and (b) technical and advisory services and training to support the adoption of technology and use of climate-smart practices for increasing diversification and climate resilience at the landscape level. The subcomponent will primarily focus on different support intervention lines to cover the direct assistance to the main types of beneficiaries: (a) small- and medium-size crop farmers (most of them currently growing annual crops)[15] and (b) medium-size commercial farmers (mostly producing high-value perennial/tree crops already inserted in value chains).[16]

27. In addition to the provision of support (key inputs), the beneficiaries will receive technical assistance through MAF's extension services (to be strengthened in parallel by the Project through training, institutional strengthening, and increased mobility), as well training through participation in farmer field schools (FFSs), demonstration/dissemination events of technical practices and technologies in field days, and other extension/technology dissemination activities organized by MAF under the Project. This training and technical assistance will be particularly focused in the adoption of new and effective technologies and modern inputs to gradually increase climate resilience in the agricultural sector.

28. The overall intervention will reach around 4,600 farmers and will enable the restoration of about 2,470 ha (6,100 acres) of cropping area in the following cropping seasons. These beneficiaries will be selected by the PIU/MAF based on transparent criteria to be made public and detailed in the Project Operations Manual (POM) and with transparent sharing of information pertaining to the outcome of the selection process (see annex 1). Under this subcomponent, the Project will finance procurement of key inputs such as seeds/seedlings, fertilizers, tools, and other materials in accordance with the technical recommendations made by MAF and as agreed between the beneficiary and the extension agent (annex 1), as well as technical advisory services and training. The Project will also finance incremental operational expenses for MAF needed for the storage and distribution of inputs and mobility expenses for the MAF's field extension agents involved in these activities.

29. The component will focus on scaling up climate-resilient technologies and climate-adapted practices with the objective of building up climate-resilience in the agricultural cropping systems supported by the Project, as well as to contribute to crop productivity gains. Measures to be promoted are:

(a) soil management practices aimed at improving on-farm soil fertility and micronutrient management;
(b) adopting when possible, integrated systems, combining different crops, pastures and forests, with soil protection measures;
(c) climate-adapted seeds varieties that have a short duration cycle to maturity, and are drought-resistant, heat-stress resistant, and/or saline-tolerant; and
(d) measures to enhance water productivity and water-use efficiency.

Subcomponent A.2: Restoration of Livestock and Fisheries Systems (Total cost: US$5.0 million)

30. This component aims to help in restoring production capacity and livelihoods of livestock farmers and fisherfolk, enhancing climate resilience and efficiency of production systems, and promoting agribusiness capabilities. Under this subcomponent, the Project will finance procurement of inputs and

crops, and inserted into developed value chains (generally producing perennial crops and fruits).
[15] Such as dasheen, tannia, yam, sweet potato, banana, and vegetables.
[16] Such as coconuts, cocoa, citrus, ginger, avocado, and coffee.

materials needed by the livestock farmers and the fisherfolk and boat builders, any necessary consultant and technical advisory services and beneficiaries training, and incremental operational expenses for MAF's field extension agents assisting these beneficiaries and for the distribution of inputs.

31. **Support to medium-scale commercial livestock farmers.** The livestock interventions under this subcomponent aim to reestablish the livestock production base that was severely damaged by Hurricane Maria and build a more sustainable and climate-resilient sector. The scheme will support about 200 livestock producers (where an estimated 20 percent will be women). The Project will assist these producers through investment support to restore the damaged animal shelter/housing and other infrastructures for production of poultry (layers and broilers), goats, sheep, rabbits, and pigs, and beekeeping. A set of simple mechanisms will be put in place to ensure that the beneficiaries follow climate-resilient specifications and effectively co-finance the activities approved in the investment plans (see annex 1; and further details to be incorporated into the POM).

32. **Support to fisherfolk.** The fishery subsector interventions are aimed at restoring fish supply and contributing to livelihoods restoration and revenue streams in the local economy. The Project will support about 150 individual eligible fishers who are already members of the local seafood value chain operating within voluntary guidelines. Specific interventions to be supported by the Project include (a) repair/construction of about 150 boats for fisherfolk (up to 50 percent of the total cost of the boat subject to a maximum of US$5,500 per beneficiary) and (b) reconstruction/rehabilitation of about 5 boat-building facilities (up to a maximum of US$5,500 per beneficiary).

Subcomponent A.3: Building of Climate Resilience and Agribusiness Capabilities (Total cost: US$2.2 million)

33. **Climate resilience.** To adequately support the investments at the farm level under Subcomponent A.1, the Project will provide technical assistance for development of more productive and climate-resilient systems, through international recruitment of experts to prepare development strategies specifically needed in Dominica's context (based on the current situation, vulnerability conditions, relative competitiveness constraints, and development strategy) for key agricultural products (either presently being grown or to be introduced) that will inform investment directions with regard to changing weather patterns, natural disasters, and market opportunities, as well as providing long-term development directions for each crop industry. These experts will also train extension agents, rural workers, and farmers in crop production; introduction of new crops varieties; and other topics such as climate-smart agricultural practices, water management and harvesting, marketing, business management, and improved postharvest handling techniques. Therefore, the subcomponent will finance consulting services (firms and/or individuals), non-consulting services including advisory and training services, and capacity-building inputs and events.

34. **Agribusiness.** This subcomponent will also contribute to building agribusiness capabilities among small- to medium-size crop and livestock farmers and fisherfolk who would have benefited under Subcomponents A.1 and A.2. Customized training under the subcomponent will target small farmers and fisherfolk who are members of cooperatives or formal agriculture producers' organizations (APOs). Channeling the specialized training through cooperatives and APOs is essential to maximize results, including greenhouse gas (GHG) mitigation outcomes from climate-smart design elements. These legally recognized organizations have the potential to act as aggregators to (a) serve as a formal channel to marketing and add value to produce from small-scale farmers and fisherfolk; (b) deliver technical

assistance to small-scale farmers, including GHG mitigation outcomes from climate-smart design elements; and (c) serve as the country's platform to boost its agricultural regional and international market share. The subcomponent will also train MAF's public extension agents in climate-smart agricultural practices and will undertake market and value chain studies and assist in the preparation of the country's medium-term agribusiness development strategy.

35. In line with Dominica's Intended Nationally Determined Contributions, the main climate benefits and co-benefits, deriving from interventions under Component A, are: the rehabilitation of 2,044 hectares of annual and perennial crops with improved agricultural practices; the transition from traditional to high value and climate resilience systems in 425 hectares of annual and perennial crops; the rehabilitation and resilience enhancement of productive systems for 200 specialized livestock farmers and 150 fisherfolks; the sustainable management of approximately 1,500 hectares of grasslands, ranges and paddocks (corresponding to the 200 specialized livestock farms); and, the use of live fences and plantations in an area equivalent to 100 hectares of grasslands, ranges and paddocks (with trees enhancing land management and livestock nutrition).

Component B: Restoration of Key Productive Infrastructure and Institutional Strengthening (Total cost: US$10.6 million)

Subcomponent B.1: Restoration of Key Infrastructure in Agriculture, Livestock, and Forestry (Total cost: US$8.3 million)

36. This subcomponent will help in restoring key public sector's infrastructure and assets damaged by the hurricane and reestablish the essential public services for up to 4,800 crop and livestock farmers. The key areas where reconstruction or rehabilitation of public infrastructure is needed include (a) five crop propagation centers (including forestry), (b) a Central Livestock Farm (CLF), (c) MAF regional offices and training centers, (d) Forestry Division's sylvicultural centers and facilities, (e) building reconstruction and rehabilitation of eco-trails, and (f) rehabilitation of a community irrigation system.[17] The rebuilding initiatives will be undertaken with a more resilient construction code and the public infrastructure will be restored in line with improved standards of safety to reduce the impact of future climate and weather risks. Therefore, this subcomponent will finance (a) consulting services for engineering design and supervision of works, (b) civil works; (c) equipment, including construction equipment, office and communication, electronic equipment, vehicles, and water storage tanks and water distribution; (d) other goods needed for the restoration of eco-trails; and (e) incremental operating costs for the installation of equipment and for the restoration of services by the relevant division of MAF.

Subcomponent B.2: Institutional Strengthening and Capacity Building of MAF (Total cost: US$2.3 million)

37. The Project will provide capacity-building assistance to MAF in the core areas of (a) project management (including the establishment of Management Information Systems, management of social and environmental issues, public-private partnerships, efficient use of private financial services, agribusiness, etc.); (b) conducting analytical studies to support the revision of policies and regulatory frameworks (risk transfer mechanisms, national certification systems, agricultural information systems, and revision of the Fisheries Act); (c) building capacity for carrying out agricultural census/survey, assessment of MAF's readiness for conducting such a census/survey; (d) conducting several analytical studies on key areas to support ongoing efforts to strengthen the institutional structure of MAF; (e)

[17] Before proceeding with rehabilitation of community irrigation system, a feasibility study will be carried out to establish technical, economic, and financial viability.

contributing to developing an e-agriculture strategy for the agriculture, fisheries, and forestry sectors; (f) contributing to developing an integrated management information system (MIS) for the agriculture sector; (g) supporting the efforts to develop a fisheries community insurance model (building resilience and reducing the potential risks); (h) assist in the development of a draft national mid-term agribusiness strategy and a communications strategy for the Project. Items to be procured by the Project include specialized consulting services (individuals and firms), non-consulting services including advisory and training services, training events, related inputs, and incremental operating costs.

38. In line with Dominica's NDC, the main climate benefits and co-benefits, deriving from interventions under Component B, are: the rehabilitation and climate proofing of public infrastructure, including buildings, training facilities, propagation centers, eco-trails and irrigation systems; the clearing (including wood salvaging where possible), reforestation and restoration of 500 hectares in forest and highly vulnerable areas of watersheds affected by Maria (with seedlings from the propagation centers); and, enhanced institutional framework to facilitate coordination/implementation of priority climate change measures and the mainstreaming of climate change activities into national, sectoral and community planning/development.

Component C: Project Management and Coordination (Total cost: US$2.4 million)

39. This component will support the establishment of the PIU within MAF, to serve as the unit responsible for the overall implementation and coordination of the project activities, as well as the setting up of the IST to be established within the Ministry of Finance (MoF) (see annexes 1 and 2 for detailed implementation arrangements). The overall implementation responsibilities of the Project will rest with the PIU within MAF. The overall safeguards advisory and fiduciary (procurement and FM) responsibilities of the Project will rest within the PIU, which will benefit from close, hands-on procurement support from the shared services of the IST, in support of post-Maria recovery efforts.

40. The Project will finance (a) incremental dedicated staff for the establishment and operations of the IST (to be shared with other projects, in proportions to be determined) and for the PIU; (b) goods and services for setting up the offices and for establishing an M&E system; (c) international recruitment of technical experts (firms and individuals)/consultants in critical project management areas; (d) preparation of environmental and social safeguards studies and instruments, including development of a grievance redress mechanisms (GRMs); (e) non-consulting services, for example, verification services, advisory, capacity building and training inputs and events; (f) incremental operating costs; (g) impact evaluation and technical and financial audits; and (h) development of a communication strategy for the Project to increase awareness and transparency.

Component D: Contingency Emergency Response Component-CERC (US$0 million)

41. The objective of this component is to support the Government's emergency response and reconstruction in the event of an eligible emergency. An eligible emergency is an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact associated with natural or man-made crises or disasters. At the request of the Government, the World Bank will reallocate uncommitted funds from other components into this component. The mechanism for declaration of emergency would be in accordance with current local legislation in Dominica. At the moment, the Declaration of the State of Emergency is done by the President of the Commonwealth of Dominica, in accordance with the Emergency Powers (Disaster) Act No. 20 of December 17, 1987, Chapter 15:03 of the revised laws of the country.

B. Project Cost and Financing

42. The Project will be financed through Investment Project Financing (IPF) over a period of five years. As shown in Table 2, the total project cost is expected to be US$29.5 million, comprising financing from the World Bank for US$25.0 million (84.7 percent of total project cost), through IDA credit and Crisis Response Window (CRW) grant (US$ 5 million and US$20 million equivalent, respectively), and a GoCD financing of US$2.9 million (9.8 percent), while beneficiary contribution will amount to US$1.6 million (5.4 percent). The Project will also allow retroactive financing for the restoration of selected high-priority infrastructures damaged by Hurricane Maria, project consultancies, operating cost (including staff), and other key activities associated with the Project. This retroactive financing will be up to an aggregate amount under Category (1) not to exceed US$800,000 equivalent from the Grant and US$200,000 equivalent from the Credit for Eligible Expenditures for payments made after March 23, 2018.

Table 2. Summary of Project Costs (US$, millions)

Components/Subcomponents	IDA			Beneficiaries	Government	Total
	CRW	IDA	Subtotal			
Component A: Restoration of the Productive Base for the Recovery of Agriculture Livelihood						
A.1: Restoration of Cropping Systems	8.0	0	8.0	0.6	0.7	9.3
A.2: Restoration of Livestock and Fisheries Systems	3.3	0	3.3	1.0	0.7	5.0
A.3: Building of Climate Resilience and Agribusiness Capabilities	1.4	0	1.4	0.0	0.8	2.2
Subtotal Component A	**12.7**	**0**	**12.7**	**1.6**	**2.2**	**16.5**
Component B: Restoration of Key Productive Infrastructure and Institutional Strengthening						
B.1: Restoration of Key Infrastructure in Agriculture, Livestock, and Forestry	2.9	5.0	7.9	0.0	0.4	8.3
B.2: Institutional Strengthening and Capacity Building of MAF	2.3	0	2.3	0.0	0.0	2.3
Subtotal Component B	**5.2**	**5.0**	**10.2**	**0.0**	**0.4**	**10.6**
Component C: Project Management and Coordination						
Subtotal Component C	**2.1**	**0**	**2.1**	**0.0**	**0.3**	**2.4**
Component D: Contingency Emergency Response						
Subtotal Component D (CERC)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total[18]	**20.0**	**5.0**	**25.0**	**1.6**	**2.9**	**29.5**

C. Lessons Learned and Reflected in the Project Design

43. The design of the Project benefited from experience gained from the implementation of the Disaster Vulnerability Reduction Project (P166540) in Dominica, as well as from other relevant World Bank financed operations in the region and across different countries/regions. The highlights of key lessons reflected in the project design aimed at increasing the likelihood of success are the following:

- The main lessons learned from a World Bank-funded operation in a similar emergency (Haiti – Relaunching Agriculture: Strengthening Agriculture Public Services II Project (P126744)) were to (a) quickly establish a strengthened task team to support the emergency, (b) provide quick and

[18] US dollar amounts correspond to: CRW Grant SDR 13.9 million; and IDA Credit SDR 3.5 million (Rate USD1=SDR0.69161554).

simple inputs and repairs to infrastructure and services, and (c) target beneficiaries already identified in national registers for better coordination and prioritization among partners.

- With the effects of climate change and severe weather patterns becoming more prevalent, vulnerable countries need to adopt climate-smart agricultural technologies and practices for example, selecting crop varieties more resilient to predicted climate change effects, and build hurricane-resistant infrastructure. Strategic planning for each commodity and a national agriculture investment plan to set strategic directions is now critical for longer-term agricultural sustainable development. All major investments should prioritize climate change and resilience against natural disasters as an important determining factor for consideration and inclusion in design and implementation.
- World Bank-funded projects in the Caribbean region (for example, Grenada Small Farmer Vulnerability Reduction Initiative) demonstrated the effectiveness of providing 'one-off' incentives for the immediate adoption of improved technologies and on-farm capitalization of key crops and livestock following external shocks, for improving rural incomes. The resulting increased flow of fresh produce into local markets helped reduce the country's dependence on imports and provided more affordable healthy foods throughout the country.
- Transparent targeting of beneficiaries and regular, clear communications with information on outcomes of beneficiary selection process are critical to successful outcomes.
- The sustainability of project investments is enhanced by active stakeholder decision making and beneficiary contributions, as well as the provision of technical assistance throughout the subproject cycle. Beneficiary contributions and technical assistance have been the key features of all main support schemes implemented.
- An integrated approach that combines hard investments (such as building public infrastructure to storm-resistant standards) with soft support (capacity-building and advisory support) is key to maximize impact, build agricultural resilience, and ensure sustainability of project outcomes.
- Properly integrating the project activities into the GoCD's own programs will enhance Government ownership and long-term sustainability of project interventions and will also help mainstream innovations within public sector institutions.
- Based on the experience gained from the implementation of the recent agricultural cash transfer program under DVRP, there is a need to: (a) have a strong protocol of intervention in case of emergency, with a clear and comprehensive emergency operational manual; (b) establish solid project management information system (including identification, verification, and monitoring of project beneficiaries); (c) prepare clear communication protocols addressing technical aspects of communication (which channels, timeline, etc.) as well as strategic aspects (what needs to be communicated to which audience, management of expectations) to make project implementation activities transparent and widely-known; and (d) implement an effective complaints redress mechanism that is understood by all stakeholders, user-friendly and ensure confidentiality of information.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

44. MAF will have overall responsibility for project implementation. At the highest level, there will be a Project Steering Committee (PSC) chaired by the Financial Secretary of MoF and comprising the Permanent Secretary of Agriculture and Fisheries (PSAF) and the Permanent Secretary, Economic Planning, and other relevant ministries/agencies. This PSC will be established to provide strategic

oversight and policy directions and interinstitutional coordination and to review and resolve major implementation issues. The PSC will approve the annual Project Implementation Plan (PIP) and requests for budgetary allocations. The final composition of the PSC will be defined in the POM. The Permanent Secretary of the Ministry of Agriculture and Fisheries will act as the secretary of the PSC and will have overall responsibility for project implementation and ensure coordination between the PIU and IST.

45. A PIU will be established within MAF and will have overall implementation and coordination responsibility of the Project. The PIU will report to the PSAF and will be daily managed by a full-time Project Manager. The PIU will be responsible for (a) coordinating and implementing all project activities as specified in the Financing Agreement and the POM; (b) ensuring that the requirements, criteria, policies, procedures, and organizational arrangements set forth in the POM are applied in carrying out the Project; (c) preparing all project implementation documents and reports (except for FM and procurement);[19] (d) preparing all terms of references (ToRs) and technical specifications for bidding documents required to ensure proper project implementation; (e) establishing a sectoral M&E system for the Project; and (f) establishing and managing a GRM for the Project.

46. The PIU will be staffed, in principle, with the following key staff: (a) a project manager, (b) a procurement officer, (c) a civil engineer, (d) an environmental safeguards specialist, (e) a social development/safeguards specialist, (f) an M&E specialist, (g) an FM analyst, (h) a communications specialist; and (i) technical officers. The procurement officer and the FM analyst will coordinate with the IST and provide all relevant documents and information to carry out the IST's functions. The PIU will also recruit short-term internationally selected consultants to provide technical support in critical areas such as program management, monitoring and impact measurement, agribusiness, information technology in agriculture, climate resilience, and crop diversification as needed. A full description of the PIU staffing with roles and responsibilities will be described in the POM. The technical divisions of MAF will implement the specific project interventions in close coordination with the PIU under the overall supervision of the PSAF, as specified in the POM.

47. An IST to support the implementation of World Bank-funded projects will be established within MoF. The IST will serve as a shared resource for all World Bank-funded projects to provide advice and assistance in procurement, FM, and safeguards support to the respective PIUs in different ministries. The IST will be staffed with (a) a portfolio manager, (b) a senior financial manager, (c) two internationally selected senior procurement specialists, and (d) a senior safeguards adviser. The portfolio manager will be responsible for providing policy guidance, coordination, and oversight of project activities, as well as broader functions in overseeing the reconstruction process being supported under the respective projects. The IST will work in close coordination with the PIU, sharing the resources and expertise available, as needed, during implementation. The IST will also mentor and train the PIU staff to build capacity within the ministries, which aligns with the GoCD's directive of strengthening in-house capacity for project implementation and execution. This IST model is consistent with current efforts being undertaken under the ongoing DVRP, whereby an international procurement adviser provided close support to the PIU staff, which greatly augmented the quality of procurement undertaken, allowing for greater opportunities for training, guidance, and mentorship.

[19] All environmental- and safeguards-related documents and reports will be prepared by the PIU and FM and procurement-related documents and reports will be prepared by the IST.

B. Results Monitoring and Evaluation

48. An M&E specialist at the PIU will coordinate monitoring activities by the technical divisions of MAF. MAF/PIU will (a) compile and consolidate data and verification documents; (b) ensure data quality; and (c) prepare and submit the reports to the PSC, IST, and the World Bank on time.

49. A results-based M&E system would monitor project implementation using the following methods and tools: (a) Results Framework, see section VII; (b) M&E strategy regarding information requirements, tools, and methodologies for data collection, analysis, and reporting; (c) comprehensive M&E plan with clear roles and responsibilities with respect to data collection and reporting; and (d) internal and external periodic assessments and evaluations, which include baseline studies, beneficiary assessments, midterm evaluations, ex post evaluation, and impact evaluations. The heads of the participating technical divisions will be responsible for process and performance monitoring of individual activities and will consolidate and analyze all M&E data provided by the field-level offices.

C. Sustainability

Sustainability

50. The Project adopts a simple yet effective technical approach by providing critically important inputs and materials to targeted beneficiaries for supporting the recovery of their livelihoods. The technical divisions of MAF will implement the key project interventions. In addition, climate-resilience features will be incorporated into the design and construction of productive infrastructure and also into the demonstration and dissemination of modern agricultural technologies and practices. The theory of Change for the Project can be found in annex 7.

51. Reconstruction of damaged infrastructure, such as irrigation facilities, propagation centers, the CLF, fishery support structures, and other MAF facilities, focuses, in the short-term, to supporting primary producers to quickly resume production and supply more fresh produce to local markets. To help prevent such widespread infrastructure (including livestock sheds) devastation during the next severe storm event, all infrastructure will be rebuilt, as much as possible, according to disaster-resilient standards. MAF intends to consolidate their propagation centers and introduce modern practices and systems, including renewable energy structures. The process to rebuild will be informed by necessary studies, assessments, and recommendations undertaken by engineering and international experts in the field of plant propagation as a prerequisite to procuring civil works.

52. MAF realizes that its capacity to provide effective services and plans for future developments in all agricultural subsectors is limited. Therefore, the required budgets have been proposed in the Project for international recruitment of technical advisory consultants to support reforms in MAF, industry development, and strategies for each selected commodity produced in Dominica to remain productive during the next few decades in the face of changing weather patterns, market fluctuations, trans-border diseases and pests, adoption of industry best practices, and so on. Dominica has limited resources and these technical interventions are designed to provide advice for the most impact for MAF's future investments in the sector.

53. The resultant institutional and implementation arrangements for project activities were designed to secure ownership and commitment of the authorities toward achieving the PDOs. The proposed interventions were further informed by counterparts and by other stakeholders involved in agriculture in

Dominica—farmers, traders, cooperative representatives, finance providers, other government agencies, community organizations (for example, hucksters' association), and processors.

V. KEY RISKS

54. **Overall risk is rated as High** because of high risks associated with political and governance, macroeconomic environment, institutional capacity and climate change in the aftermath of Hurricane Maria, and weak institutional capacity for implementation and sustainability.

55. **Political and governance risk is High.** While this risk is largely outside the project control, the level is considered high, taking into account the current conditions resulting from the Hurricane Maria and the high level of expectations by the population, where perception of unfair handling of support to beneficiaries could lead to increased mistrust and discomfort. As mitigation measures, the Project will apply the following: (a) set and strictly apply clear eligibility criteria, (b) publicly disclose information about the call for applications and selected beneficiaries, and about the delivery of goods, and (c) close monitoring of project progress. A detailed protocol will be included in the POM.

56. **Macroeconomic risk is High** because of the stress on the fiscal situation due to the substantial damages and losses arising from natural disasters such as Hurricane Maria. According to the PDNA, the output is likely to continue declining. This could worsen the fiscal balance to deficits up to 13 percent of GDP in FY2018/19 and, thus, undermine the Government's capacity to allocate the resources needed for the Project. Moreover, high inflation and depreciation of the local currency could negatively affect the Project. These risks will be partly mitigated by the allocation of resources for contingencies and by incurring most project expenditures in U.S. dollars.

57. **Institutional capacity risk for implementation and sustainability is High.** The risk to attainment of the PDO arising out of institutional capacity for implementation and sustainability is rated High because, despite prior experience in implementing development interventions, it is the first time for MAF to implement a project of this size and complexity. Capacity weaknesses of MAF in areas of project management including monitoring and evaluation, fiduciary and safeguards aspects, ICT application in agriculture, and building of climate resilience will be mitigated partly through services of internationally recruited short-term experts, who among others, will have explicit roles in strengthening the capacities of MAF.

58. **Fiduciary (Procurement and FM) project risk has been assessed as Substantial.** This is due to the identified institutional weakness and lack of staffing of the implementing agency (MAF) to undertake the fiduciary (procurement and FM) functions and the complex fiduciary arrangements of the project. To mitigate the risk, it is proposed that experienced internationally recruited experts in procurement and FM will be provided to the Project by the IST within MoF.

59. **Environment and social risk has been assessed as Substantial.** This is due to the limited capacity in implementing safeguards in a nationwide program, the risk to the Project of not reaching the intended potential beneficiaries resulting in social tension and complaints especially considering the post-hurricane needs and requirement that the process be demand driven. This risk will be mitigated through a robust information communication campaign and accessible and responsive GRM. The preparation of the GRM will draw on existing GRMs being implemented in Dominica and will use the agriculture extension system.

60. **Climate change and extreme weather events risk (other) is High.** Climate and disaster risk screening was carried out for the Project. The analysis indicates that the targeted sectors in Dominica are currently highly vulnerable to the negative impact of climate change, which is further exacerbated by the general development context in the country. Drought, sea level rise, storm surge, and intense winds represent critical risks, particularly for cropping and livestock systems. The Project cannot fully address future risks but it seeks to mitigate against these risks by providing support to climate-resilient investments, infrastructure, and institution building.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

61. **Economic benefits (Annex 5).** The main benefits of the Project are expected to come from incremental net revenue to beneficiaries from project-supported activities in the agricultural, livestock, fisheries, and forestry sectors. Activities include post-hurricane production recovery with improved and more climate-resilient crop (annual and perennial crops) and livestock production (small ruminants, pigs, poultry, and so on), fishing, and related activities such as production boatbuilding, as well as forestry-related endeavors, such as production of seedlings for reforestation, salvaging of fallen wood, and the rehabilitation of tourist-trails. The Project will also contribute to climate change mitigation through an estimated net reduction in GHG emissions of approximately 138,825 tCO_2e over the 15-year period of analysis used for the economic analysis (further details on GHG accounting in annex 4).

62. **Economic viability and sensitivity analysis.** The project's economic cost-benefit analysis (CBA) indicators were estimated using a lower carbon price (LCP) assumption and a higher carbon price (HCP) assumption to estimate economic benefits from reducing GHG. Under the LCP scenario, the economic rate of return (ERR) for the Project was 24 percent and the net present value (NPV) was approximately US$7.8 million. Under the HCP scenario, the ERR was 28 percent and the NPV was approximately US$11.3 million. The robustness of these indicators was tested and confirmed with a sensitivity analysis that resulted in a switching value for cost increments of 37 percent and 45 percent under the LCP and HCP scenarios, respectively, and of 60 percent and 81 percent for reductions to economic benefits under the LCP and HCP scenarios, respectively. Without considering the economic benefits generated by the net reduction in GHG emissions, the ERR was estimated at 19 percent with an NPV at around US$4.3 million. These indicators strongly suggest that the Project represents an economically worthwhile investment from the perspective of Dominica's society.

63. A financial CBA was performed for representative productive activities to be promoted by the Project (the details are in Annex 5). All modeled productive activities proved financially feasible on their own account, suggesting that project beneficiaries would have sufficient financial incentives to engage in project-supported activities and adopt the improved practices and technologies to be promoted.

B. Technical

64. Three elements summarize the rationale for the selected technical design, its appropriateness to the Borrowers needs, and its conformity with relevant international standards. First, in the short term, the Project addresses the key bottleneck for the recovery of Dominica's rural economy: the severe losses of asset base and capital, which prevent farmers and fisherfolk from resuming production. This situation is aggravated by the lack of insurance schemes. Without government assistance, farmers and fisherfolk will take a long time to restore their production means, while the most vulnerable may not be able to escape

the poverty trap. Second, the design conforms to the borrower's desire to rehabilitate the rural production sectors in a more climate-resilient manner. The Government recognizes that, despite the severe damages, the disaster gives an opportunity to build better production systems and incorporate technologies that will pay off in the medium term. And third, the design is based on the principle of sharing the costs of recovery rather than on providing free government assistance. According to international standards and drawing upon best practices, the Project seeks to spark private interest to resume production by providing critical inputs and materials that will be complemented by own labor and materials.

C. Financial Management

65. A simplified Financial Management Assessment was carried out[20] to evaluate the adequacy of the proposed FM arrangements in MoF and MAF for the implementation of the Project. The objective of the assessment was to determine whether the Project will have acceptable FM and disbursement arrangements in place for efficient implementation. It was concluded that the proposed implementing agencies, within MoF and MAF, will have adequate FM arrangements in place that can provide, with reasonable assurance, accurate and timely information on the use of project funds provided that the mitigating measures noted in paragraph 65 have been addressed and put in place. Given the risks and challenges listed in paragraph 65, the fiduciary risk rating is Substantial.

66. Currently, MAF currently faces the following FM related challenges: (a) lack of fiduciary staff within MAF with knowledge of the World Bank's FM guidelines and requirements, (b) project design is complex requiring appropriate FM arrangements and systems, which are not currently in place, and (c) nature of this emergency operation and lack of available capable staff to implement and monitor the project activities.

67. To address the above challenges, the following measures are envisaged:

(a) The GoCD will hire an FM manager at the IST (MoF) with necessary knowledge and experience in all GoCD finance systems and seniority in financial procedures (budget, accounting, and reporting) and with the skills to rapidly support project implementation. The GoCD will also assign or hire local staff (FM analyst) for the PIU while ensuring definition and clear roles and responsibilities between the multiple ministries, including identification of key controls that will need to be strengthened and adapted taking into account the design of the project. These arrangements should be acceptable to the World Bank and updated in the POM.

(b) Develop the MIS to be used for inputs, materials, and other supports to be provided by the Project and ensure it is integrated with GoCD's Integrated Financial Management Information System (IFMIS). Additionally, confirm the reporting arrangements and ensure the modification (budget line) of the applicable information systems (SmartStream), enabling it to insert the information, and generate all necessary financial reports.

[20] In accordance with the Condensed Procedures provided under paragraph 12 of the Bank Policy on Investment Project Financing: *"Projects in Situations of Urgent Need of Assistance or Capacity Constraints"* . This request is also pursuant to paragraph 53 of the Bank Policy on Investment Project Financing: *"Exceptional Arrangements in Situations of Urgent Need of Assistance or Capacity Constraints*".

D. Procurement

68. Procurement under the Project will be conducted in accordance with the World Bank's 'Procurement Regulations for IPF Borrower' (July 2016 and revised November 2017) and with reference to the 'World Bank Guidance: Procurement in Situations of Urgent Need of Assistance or Capacity Constraints' (July 22, 2016), on how to support operational procurement in Situations on Urgent Need of Assistance or Capacity Constraints described under paragraph 12 of the Bank Policy on Investment Project Financing. The Project will be subject to the World Bank's Anticorruption Guidelines, dated October 15, 2006, and revised in January 2011, and as of July 1, 2016. The Project is being processed under paragraph 12 of the Bank Policy on Investment Project Financing: *"Projects in Situations of Urgent Need of Assistance or Capacity Constraints"* due to the urgent need of assistance following Hurricane Maria. The project will also make appropriate use of the increased flexibility provided for in the guidance above indicated due to the borrower's weak procurement capacity.

69. A procurement assessment was carried out to evaluate the adequacy of existing procurement arrangements related to the implementation of the Project. The Project will be implemented through the PIU to be established within MAF, coordinate and work closely with the IST of MoF. This assessment is with respect to the proposed procurement arrangements and may require a reassessment during implementation if there are changes to those arrangements. The objective of the assessment was to determine whether the GoCD, through MAF, has acceptable procurement arrangements in place to adequately undertake the procurement function required under the Project. It concluded that, at this moment, there is no dedicated procurement function within MAF and no viable implementation arrangements were identified within the implementation agency. MAF has some previous experience in implementing international donor-funded projects. However, all the projects implemented so far by MAF were overseen by dedicated PIUs formed exclusively to support the specific project and the capacity after project conclusion was not retained.

70. The specific procurement challenges related to this operation are the following: (a) no dedicated procurement function or staff within MAF; (b) no viable procurement implementation arrangements in place within MAF; (c) limited experience within MAF with World Bank- or international donor-funded projects; and (d) no institutional experience in preparing technical documents necessary for procurement packages, such as ToR and technical specifications, and no internal experience in evaluating bids and proposals which, with such short period for proper preparation, increases the risk of delays in the project implementation. To manage procurement risk, the implementation of the following measures and arrangements is recommended:

(a) MoF shall urgently engage the services of highly qualified procurement specialists to staff the proposed IST. The consultants need to have previous experience with international donor-funded projects and knowledge of the World Bank Procurement Regulations so that they can rapidly support project implementation and ensure adherence to the procurement regulations of the World Bank.
(b) The procurement officer engaged at the PIU level must provide the necessary implementation function with close, hands-on support from the IST procurement specialists and serve as key liaison between the PIU and the IST concerning procurement.
(c) Ensure definition and consensus of inter-institutional agreements that include clear roles and responsibilities between MAF and the new IST at MoF, to ensure timeliness of the implementation of the Procurement Plan and avoid delays on the procurement cycle.

(d) Engagement of external consultants to support MAF in developing ToRs, technical specifications, and support the team during bid evaluation stage.
(e) Include the procurement arrangements in the POM that are acceptable to the World Bank and which clearly define roles and processes applicable to the Project.

E. Social (including Safeguards)

71. The Project is being designed under the World Bank's Condensed Procedures contained in paragraph 12 of the Bank Policy on Investment Project Financing: *"Projects in Situations of Urgent Need of Assistance or Capacity Constraints"* or because of natural or man-made disasters. This satisfies the requirements for the project to be designed under the paragraph 12 of the of the Bank Policy on Investment Project Financing on "Projects in Situations of Urgent Need of Assistance or Capacity Constraints". Once the policy is triggered, the safeguards preparation may be deferred until an appropriate time. A Safeguards Action Plan (SAP) is prepared with instruments and timing of their disclosure agreed to with the Government.

72. The social and environmental impacts will be positive for Dominica's agricultural sector. The Project will improve the livelihoods of rural farming communities by restoring critical farm infrastructure, strengthening livestock facilities based on new designs, and cultivating crop varieties that will potentially make crops more resilient. Similarly, potential improvements are likely in the fishing sector through capacity enhancements with respect to helping fisherfolk rebuild better boats, new arrangements for securing of boats, and engaging in better fishing practices.

73. **OP 4.12 - Involuntary Resettlement will be triggered.** No land acquisition or physical relocation of households will be undertaken in the Project. However, some investments could have unintended impacts on livelihoods (for example, expanding the area under cultivation could have an impact on livelihoods of tenant farmers). A Social Action Plan has been prepared indicating what instruments will be prepared and their timing to mitigate against any impacts on assets or livelihoods. These will include an (a) environmental and social screening checklist to ensure there is no physical relocation and (b) a simple template for site-specific mitigation measures, including simple Abbreviated Resettlement Action Plans (ARAPs). No new restrictions to forests are anticipated and indeed, in consultations with farmers, the opening of these trails for ecotourism and access to farms was a priority.

74. **The Project will trigger OP 4.10 - Indigenous Peoples.** Dominica's indigenous community, the Kalinago, is among the locations where project investments will be made. Impacts are overall expected to be positive. The main risks are to ensure that farmers who meet the eligibility criteria can participate and receive the benefits packages and technical assistance. The Indigenous Peoples Plan (IPP) will ensure that residents of the Kalinago Territory are provided the appropriate crop packages and are aware of the Project and how to participate using culturally appropriate channels to ensure their free, prior informed consent (FPIC).

75. **Citizen engagement.** The project's communication and outreach strategy will be the key tool for citizen engagement, with emphasis on early outreach to key stakeholder groups before start-up activities and through ongoing communications around selection of beneficiaries in a transparent manner, during implementation. The strategy will include specific engagement with the Kalinago community through their council.

76. The Project, through its safeguards and other instruments, will pay specific attention to disadvantaged and vulnerable groups. All the safeguards instruments will take into consideration the risks and impacts on disadvantaged or vulnerable individuals or groups who because of their age, gender, ethnicity, physical, mental or other disability, social, civic or health status, economic status or other factor may be more likely to be adversely affected or limited in being able to benefit from the Project. Any labor Influx impacts associated with the civil works will be assessed in the Environmental and Social Management Framework (ESMF) and appropriate mitigation measures will be included.

F. Environment (including Safeguards)

77. The Project has been classified as Category 'B' and OP 4.01, Environmental Assessment is triggered. The project focus is on rehabilitating existing small- to medium-scale infrastructure, generating only minor and localized environmental impacts that can be easily identified, mitigated, and managed. They will include debris management, worker's health and safety, soil stabilization, and erosion control. No impacts on natural habitats are expected and no significant conversion or degradation of critical or natural habitats will occur. Nonetheless, as there are interventions in the forestry sector and natural parks (restoration of 130 km of trails) Natural Habitats (OP/BP 4.04) and Forests (OP/BP 4.36) have been triggered. In addition, the Pest Management (OP/BP 4.09) policy has been triggered as pesticide, insecticides, and fertilizers will be purchased for the farmers. The Physical Cultural Resources (OP/BP 4.11) will be trigger as some civil works may also include excavation activities. The instruments to manage these policies and management plans will be developed under OP 4.01. Safeguards principles and objectives will be incorporated in technical assistance activities financed by the Project. These activities should follow best agricultural, livestock, fisheries, and environmental practices and the General World Bank Group Environmental, Health, and Safety (EHS) Guidelines and the specific industry World Bank Group EHS Guidelines for the agribusiness and food production as well as for the forestry sector.

78. In line with paragraph 12 of the Bank Policy on Investment Project Financing on "Projects in Situations of Urgent Need of Assistance or Capacity Constraints" (allowing for certain safeguards requirements to be deferred to after project approval), an SAP was prepared and is detailed in annex 6. The SAP provides a road map for preparation of safeguards instruments to ensure identification and management of environmental issues and risks relating to project implementation. The SAP is a binding roadmap for safeguards compliance during project implementation and provides clear guidance to MAF on the types of actions and instruments required to facilitate speedy implementation of emergency services. It also includes a timetable setting forth all the steps and the sequential planning required to prepare the sageguards instruments to ensure compliance with the safeguards requirements.

Climate Co-Benefits and Greenhouse Gas Emissions Analysis

79. **Climate Co-Benefits.** The Project will bring in greater resilience to agriculture production systems in the country and will generate significant adaptation and mitigation co-benefits to climate change through multiple channels of interventions, including:(i) training 80% of all farmers and fisherfolks on climate resilient practices and technologies; (ii) promoting adoption of improved agricultural resilient technologies with climate resilience features among 3,600 farmers (over 70% of all farmers in Dominica); (iii) reconstructing all damaged public infrastructures with disaster resilient standards as part of "build-back-better" principles (offices, propagation centers, Livestock centers, eco-trials, etc.); (iv) rebuilding/rehabilitating about 200 private animal houses damaged and eligible for reconstruction following disaster resilient standards; (v) diversification into high value crops and adoption of improved

agriculture practices will improve and stabilize crop yields and improved market access by farmers.

Table 3: Project activities contributing to climate change adaptation and mitigation

Activities with adaptation and mitigation co-benefits	Percentage of Investments generating Climate Co-Benefits (%)
Component 1	**80%**
Promote overall risk awareness and benefits of adaptation/mitigation.	
Promote agricultural intensification and switch to cropping systems with improved nitrogen use efficiency, less water intensive and improved resilience (including crop mixes, resilient varieties, green corridors, land management, etc.).	
Introduce or expand use of crop mix more suited to climate change and climate variability (CC&CV), such as drought- and heat-resistant, pest- and disease-resistant, flood-tolerant and salt-tolerant crop varieties.	
Promote activities that support GHG mitigation within crop and fishery (including awareness raising).	
Component 2	**80%**
Rebuilding or reconstructing infrastructure (public and private) adopting modern codes to increase resilience to extreme weather systems.	
Support water pumping using renewable resources or more energy-efficient pumps using renewable energy sources	
Disseminate new irrigation management systems and practices to reduce vulnerability to CC&CV, including: improving water distribution strategies, changing crop and irrigation schedules, and recycling water.	
Testing and introduction of practices or techniques in farming and fishing systems more resilient to CC&CV or that reduce greenhouse gas (GHG) emissions.	

80. **Greenhouse Gas Emissions**. A GHG assessment was conducted using the Ex-Ante Carbon-balance Tool (EX-ACT) tool with inputs from the project preparation process, to estimate (a) the total GHG impact of project implementation as compared to a business-as-usual scenario and (b) the GHG emissions intensity of production systems before and after project implementation. As the analysis results show, in 20 years, the time frame of project implementation plus capitalization, the Project leads to the net sequestration of 192,658 tCO_2e, considering the business-as-usual baseline scenario. This is equivalent to a net reduction of 2.1 tCO_2e per hectare and per year. The Project brings considerable benefits in climate change mitigation when compared to the business-as-usual scenario. The Economic and Financial Analysis (EFA) of the Project valuates these benefits according to the World Bank guidelines.

G. Project Grievance Redress Mechanism

81. The Project will establish a multilevel feedback and GRM. Grievances related to project activities will be reviewed and addressed by the heads of extension offices in each participating parish. In addition, there will be an overarching GRM at MAF level. The structure and processes of these mechanisms, including their scope, memberships, procedures for receiving, documenting grievances received, decisions to redress, communication of redress, periodicity of meetings to redress, and multilevel public disclosure will be included in the POM and the ESMF. The process will be reviewed to make it consistent with other World Bank-financed projects to ensure a common approach to intake, recording, feedback routes, and resolution time lines. In addition, this mechanism will take into consideration the lessons arising from the implementation of the unconditional cash transfer program implemented by the Bank with funding available under the on-going DVRP Project immediately after the occurrence of Hurricane Maria. The GRM will be prepared within 12 weeks of project effectiveness.

H. World Bank Grievance Redress

82. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, because of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY : Dominica

Emergency Agricultural Livelihoods and Climate Resilience Project

Project Development Objectives

The Project Development Objective (PDO) is to contribute to restoring agricultural livelihoods and enhancing climate resilience of farmers and fisherfolk affected by Hurricane Maria in Dominica.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Farmers and fisherfolk reached with productive assets and services		Number	0.00	4900.00	Semiannual	Official record, field verification and technical audit	MAF/PIU
of which female beneficiaries		Percentage	0.00	20.00			
Description: Target value includes about 4,750 farmers and 150 fisherfolk. An annual technical audit will verify the extent to which direct beneficiaries are restoring their livelihoods, i.e. producing crops and livestock, or fishing, at the pre-hurricane level.							
Name: Crop area restored (including high value crops)		Hectare(Ha)	0.00	2200.00	Semiannual	Remote sensing, field verification and technical audit	MAF/PIU

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Description: High value crops include citrus, coffee, coconut, cocoa, avocado, and vegetables.							
Name: Farmers adopting improved agricultural technologies (including climate resilience)		Number	0.00	3600.00	Annual (starting at the second year of implementation)	Field verification and technical audit	MAF/PIU
of which female farmers		Percentage	0.00	20.00			
Description:							

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Farmers supported with productive inputs		Number	0.00	4600.00	Semiannual	Delivery record	MAF/PIU
of which female farmers		Percentage	0.00	20.00			
Description: An input package will include seeds and fertilizers. Packages for high value crops also include seedlings. High value crops include citrus, coffee, coconut, cocoa, avocado, and vegetables.							
Name: Farmers receiving		Number	0.00	4400.00	Semiannual	Assistance/participation	MAF/Division of

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
technical assistance and training for climate resilience technologies						record	Agriculture
of which female farmers		Percentage	0.00	20.00			
Description: It includes on-farm assistance as well as demonstrations and training in the propagation centers and the livestock central farm. Farmers participating in more than one activity will be counted once.							
Name: Farmers satisfied with technical assistance and training for climate resilience technologies		Percentage	0.00	80.00	Semiannual	Satisfaction surveys	MAF/Division of Agriculture
Female farmers satisfied with technical assistance and training for climate resilience technologies		Percentage	0.00	80.00			
Description: Based on satisfaction surveys after service delivery.							
Name: Farmers with restored infrastructure for livestock production, including climate resilient animal houses		Number	0.00	200.00	Semiannual	Delivery record, site inspections, progress reports	MAF/Division of Agriculture
of which female farmers		Percentage	0.00	20.00			
Description: “Climate resilient animal houses” refers to applying storm resistant standards (e.g. using roof member connector straps).							

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Boat-building facilities recovered		Number	0.00	5.00	Semiannual	Delivery record, site inspections, progress reports	MAF/Division of Fisheries
Description:							
Name: Fisherfolk with boats rebuilt or replaced		Number	0.00	150.00	Semiannual	Delivery record, site inspections, progress reports	MAF/Division of Fisheries
Description:							
Name: Producer organizations and cooperatives benefiting from agribusiness capacity building		Number	0.00	25.00	Semiannual	Training record	MAF/PIU
Description:							
Name: Extension infrastructure rehabilitated		Number	0.00	6.00	Semiannual	Site inspections, progress reports	MAF/PIU

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
with disaster-resilient standards							
Description: The target includes five propagation centers and one central livestock farm. These will be essential to introduce, validate and disseminate technologies for cropping and livestock production systems. “Disaster-resilient standards” include particular types of foundations and the use of roof member connector straps in buildings.							
Name: Recovered trails for delivery of forestry ecosystem services		Kilometers	0.00	130.00	Semiannual	Site inspections, progress reports	MAF/Division of Forestry
Description:							
Name: Field extension agents and governmental staff trained		Number	0.00	50.00	Semiannual	Training record	MAF/PIU
Description:							
Name: Grievances resolved within the stipulated service standards for response times		Percentage	0.00	80.00	Semiannual	Redress record	MAF/PIU
Description:							

Target Values

Project Development Objective Indicators

Indicator Name	End Target
Farmers and fisherfolk reached with productive assets and services	4900.00
of which female beneficiaries	20.00
Crop area restored (including high value crops)	2200.00
Farmers adopting improved agricultural technologies (including climate resilience)	3600.00
of which female farmers	20.00

Intermediate Results Indicators

Indicator Name	End Target
Farmers supported with productive inputs	4600.00
of which female farmers	20.00
Farmers receiving technical assistance and training for climate resilience technologies	4400.00
of which female farmers	20.00
Farmers satisfied with technical assistance and training for climate resilience technologies	80.00
Female farmers satisfied with technical assistance and training for climate resilience technologies	80.00

Indicator Name	End Target
Farmers with restored infrastructure for livestock production, including climate resilient animal houses	200.00
of which female farmers	20.00
Boat-building facilities recovered	5.00
Fisherfolk with boats rebuilt or replaced	150.00
Producer organizations and cooperatives benefiting from agribusiness capacity building	25.00
Extension infrastructure rehabilitated with disaster-resilient standards	6.00
Recovered trails for delivery of forestry ecosystem services	130.00
Field extension agents and governmental staff trained	50.00
Grievances resolved within the stipulated service standards for response times	80.00

ANNEX 1: DETAILED PROJECT DESCRIPTION

COUNTRY: Dominica
Emergency Agricultural Livelihoods and Climate Resilience Project

A. PDO

1. The Project Development Objective (PDO) is to contribute to restoring agricultural livelihoods and enhancing climate resilience of farmers and fisherfolk affected by Hurricane Maria in Dominica.

B. Project Beneficiaries

2. The direct beneficiaries of the Project are crop and livestock farmers, fisherfolk, and APOs affected by Hurricane Maria in all ten parishes of Dominica. An estimated 4,900 individual farmers and fisherfolk are expected to benefit directly from the Project. At least 20 percent of the beneficiaries will be rural women, most of whom head single-parent households and represent one of the population groups[21] that have been most affected by the hurricane. They will benefit from rehabilitation and reconstruction of agriculture, fisheries, and forestry infrastructures, adoption and dissemination of advanced technologies on modern agriculture techniques and practices, and agriculture diversification and agribusiness promotion. Also, MAF's technical and managerial staff and other participating organizations will benefit from the Project through training and capacity-building activities. It is important to stress that these beneficiary farmers/fisherfolk will receive only one type of support per beneficiary household under a subcomponent and that receiving support under one subcomponent will declare them unable to request or receive any other material investment support under another component (training and technical assistance are not considered in this restriction). The list of beneficiaries of different components will be published periodically in newspapers and public places such as community buildings and churches and will be made available on MAF's website to increase transparency in the selection process.

C. Project Components

Component A: Restoration of Productive Base for Recovery of Agricultural Livelihoods (Total cost: US$16.5 million; IDA: US$12.7 million)

3. Under this component, the Project aims to (a) help small-, medium-size, and commercially oriented crop and livestock farmers in the process of restoring their basic productive capacity, through provision of key agricultural inputs and technical assistance on an immediate basis, thus supporting food security and recovery of livelihoods, (b) assist fisherfolk in restoring the fishing capacity by providing support to acquire new boats or repair damaged ones, as well as assisting in the recovery of boat-building facilities, and (c) provide technical assistance for the development of more productive, climate-resilient systems and the promotion of agribusiness capabilities. The component consists of three subcomponents as described in the following paragraphs.

[21] According to the PDNA, women represent 39 percent of the heads of households in Dominica and about 20 percent of the total number of farmers. Nearly 76 percent of the women farmers interviewed reported that they were significantly affected by the severe loss of tools and crops. The report underscores the recovery needs of single-parent families headed by women.

Subcomponent A.1: Restoration of Cropping Systems (Total cost: US$9.3 million; IDA: US$8.0 million)

4. This subcomponent will provide support in recovery of the production capacity of small- and medium-size crop farmers,[22] mostly growing annual crops (for example dasheen, tannia, yam, sweet potato, banana, vegetables), as well as commercially oriented farmers[23] inserted into value chains (generally producing perennials crops and fruits, such as coconuts, cocoa, citrus, ginger, avocado, coffee) and help in the gradual restoration of their livelihoods and in retaining their market shares, through provision of (a) an essential package of inputs (key quality seeds and fertilizers), tools, and materials for the replanting or restoration of their crops and (b) technical and advisory services and training to support the adoption of technology and use of climate-smart practices to increase diversification and climate resilience. This support will result in enhanced food security for small- and medium-size farming households (particularly those headed by women) and greater volumes of fresh produce in local markets, thus helping the sector retaining its market share against competition from imported fruits and vegetables. Under this subcomponent, the Project will finance procurement of inputs (seeds/seedlings, fertilizers, tools, and other materials to be procured by the Project), incremental operational expenses for the distribution of inputs by MAF, and mobility expenses for MAF's field extension agents assisting these beneficiaries.

5. The overall intervention will reach an estimated number of up to 4,600 farmers (about 60 percent will be small farmers) and will enable the restoration of about 2,470 ha of cropping area in the following two cropping seasons, which will establish a robust basis for farmers to further invest in expanding their areas toward full production. The basic criteria for selecting these beneficiaries are that they (a) are full-time farmers or have agriculture as their main source of income, (b) own land or have a formal long-term lease,[24] (c) have been substantially affected by Hurricane Maria, and (d) have sufficient family labor to implement the required cropping area or financial capacity to contract off-farm supplementary (seasonal) labor. The selection of these beneficiaries would be carried out by the PIU with assistance by MAF technical departments through the following process:

- Carrying out national dissemination and information campaigns (through television, radio, newspapers, and own dissemination by MAF's extension agents) to inform all farmers of the mechanisms to be put in place, motivating them to present their expression of interest. To reach out to female-headed households, the Project will take advantage of women groups and associations and will organize targeted information activities (such as separate meetings).

- Farmers formalize their interest by registering in one of MAF's regional offices, by completing a simple registration form.

- List of interested farmers are analyzed by the PIU with the assistance of MAF extension services, by checking their compliance with the selection criteria and the farmers'

[22] For simplicity, farm size is defined in the total land occupied (either owned or rented). Small farmers: up to 0.8 ha (2 acres); Medium-size farmers: up to 2.02 ha (5 acres).
[23] Mostly commercial farmers have an area between 2 ha and 10 ha (5 to 25 acres), are competitive in producing higher-value crops, and inserted developed value chains (generally producing perennial crops and fruits).
[24] The POM will specify the types of documents to be presented by farmers in community-owned land (Kalinago Territory) and women heads of households. In the absence of secured land tenure, the project will assist farmers in formalizing either ownership or occupancy before receiving any in-kind benefit.

background experience with MAF services, as an indication of their technical capacity to implement the cropping plan.

- Determination, with the assistance of the extension agents, of the total area to be supported by the Project for each beneficiary (and cropping mix), mainly based on the existent pre-Maria area and the farmer's capacity.

- Signing a simple agreement between the beneficiary and local MAF regional offices or the extension services, by which the beneficiary commits to follow MAF's technical recommendations and use the inputs in accordance with best practices provided by MAF's extension agents in the area to be supported by the Project. Female heads of households will be particularly assisted in maximizing a diverse crop production, primarily for food self-sufficiency, with surpluses that can be stored and commercialized.

- The final lists of beneficiaries will be periodically disclosed in national newspapers as well as on MAF's website and in regional extension offices.

6. This final list of beneficiaries selected through the process described above will be used as the basis to produce a nationwide registry of farmers and fisherfolk. The Project will also provide support (technical and operational) to improve the national database and establish mechanisms to maintain it up-to-date. The database currently maintained by MAF (and previously used for the unconditional cash transfer program implemented after the hurricane under the DVRP Project) will be taken into account as another source of information and used whenever possible and adequate.

7. The subcomponent will primarily focus on three different support intervention lines to cover the direct assistance to the following main types of beneficiaries:

(a) **For small farmers** (most of them currently growing annual crops), the Project will provide 100 percent of the seeds and fertilizers needed for up to 0.81 ha (2 acres) of crops per beneficiary, with a maximum of US$1,500 per beneficiary. These inputs will be received by the beneficiary directly (in-kind) in accordance with the technical specifications for each crop to be implemented, as recommended by MAF's technical departments. The main objective is the restoration of livelihoods and strengthening of food safety.

(b) **For medium-size farmers** (also mostly producing annual crops), the Project will provide 70 percent of the seeds and fertilizers (also in-kind) needed for an area of up to 2.02 ha (5 acres) of crops per beneficiary, according to a cropping mix agreed with the extension agent, with a maximum of US$2,625 per beneficiary. This will have the same objective of restoring livelihoods and supporting food security.

(c) **For commercial farmers** (mostly producing high-value perennial/tree crops already inserted in value chains), the Project will provide up to 50 percent of the volume of a package of essential inputs, mostly seeds/seedlings, fertilizer, and materials (tools and other inputs) for restoration of their productive capacity (repairing or replanting their damaged perennial crops). The package of the required inputs and materials will be determined by the extension agents, in accordance with technical recommendations by MAF and agreed with the beneficiary. In this case, the objective is to not only restore livelihoods but also help maintain

flow of supply to markets and retain market shares. The maximum value of the package to be provided per beneficiary farmer will be US$5,500.

8. The key inputs to be provided to beneficiaries (seed/seedlings, fertilizer, tools, and materials) will be procured by the Project, either locally or internationally, according to the technical recommendations of MAF's departments, to ensure high quality and adaptation to local conditions. It is considered that these volumes would have to be purchased in tranches, to allow for potential corrections in relative quantities by crop species and varieties following real demand and conditions in the field. These inputs, purchased in bulk, will be stored in-country and distributed by MAF, either by requesting beneficiary farmers to collect their inputs from MAF's storage facilities around the country or by distributing them directly to each farmer (to be decided and recorded in the POM).

9. **Training and technical assistance to farmers.** In addition to the provision of support (key inputs), the beneficiaries will receive technical assistance through MAF's extension services (to be strengthened in parallel by the Project through training, institutional strengthening, and increased mobility), as well training through participation in FFSs, demonstration/dissemination events of technical practices and technologies in field days, and other extension/technology dissemination activities organized by MAF under the Project. This training and technical assistance will be particularly focused in the adoption of new and effective technologies (for example, contour farming and conservation buffers, soil and water management, reduced tillage, adequate cropping systems, using rotations and intercropping, new harvesting and handling practices, and so on.) and modern inputs (high quality seeds/seedlings, new improved/more resilient seed varieties, and so on) to gradually increase climate resilience in the agricultural sector. These activities will also help enhance farmers' knowledge and capability for better responding to market opportunities.

10. The Project will strengthen farmers' capacity through FFSs and demonstration plots that promote adoption of more diversified high-value crops (for example cocoa, Irish potatoes, citrus, ginger). The Project will promote new and improved production technologies that support climate adaptation technologies (for example water harvesting, mulching, adoption of more weather-resilient crop species), marketing, farming as a business, and so on. Therefore, an appropriate combination of technical, business, and operational training would be selected for each crop subsector FFS. To ensure appropriateness to women's needs, the FFS will (a) organize separate training sessions for women, providing child care if needed, (b) adapt training content to specific areas of interest, (c) provide transportation or arrange training on farmers' farms to facilitate mobility of women-headed households, and (d) complement the pool of extensions with female trainers, if possible.

11. The Project will conduct FFSs and establish demonstration plots to show industry best practices during the period of the Project. These FFS sessions will train farmers on production of high-value crops and government staff working in the field. Previous FFS experiences in Dominica indicate that groups of farmers established through FFS approaches, remained together after the completion of the Project to collaborate in various input and marketing activities, and one group (cocoa) has since evolved into a cooperative.

Subcomponent A.2: Restoration of Livestock and Fisheries Systems (Total cost: US$5.0 million; IDA: US$3.3 million)

12. This component aims to help in restoring livelihoods of livestock farmers and fisherfolk, enhancing

climate resilience and efficiency of production systems, and building agribusiness capabilities. The component will provide incentives for investments in developing livestock and fisheries through adoption of highly productive and climate-smart technologies, enhancing resilience in the long run. Under this subcomponent, the Project will finance procurement of inputs and materials needed by the livestock farmers, the fisherfolk, and the boatbuilders (to be procured by the Project), incremental operational expenses for the distribution of inputs by MAF, and mobility expenses for MAF's field extension agents assisting these beneficiaries, as well as training events and consulting services.

13. **Support to medium-scale commercial livestock farmers.** The livestock interventions under this subcomponent aim to reestablish the livestock production base that was severely damaged by Hurricane Maria and build a more sustainable and climate-resilient sector. The interventions are aimed at (a) supporting targeted commercial livestock farmers by supporting rehabilitating and upgrading their production structures; (b) providing targeted technical assistance in management of livestock systems and adoption of modern technology and mechanisms to increase resilience; and (c) carrying out training and capacity-building activities on feeding, breeding, and preventive animal health care.

14. The Project will assist these producers through investment support to restore the damaged animal housing and other infrastructures for production of poultry (layers and broilers), goats, sheep, rabbits, and pigs, as well as beekeeping. For commercial livestock producers, the Project will cover up to 50 percent of a farm investment plan (to be agreed between the farmers and the extension agent) with a ceiling of US$5,550 per beneficiary household. Eligible expenditures will include materials, tools, and other essential inputs. The support scheme will support about 200 livestock producers (where an estimated 20 percent will be women). In addition, the Project will provide technical support for the design and construction of infrastructure to be rebuilt according to storm-resistant standards, which means, for instance, anchoring walls to foundations, using solid pillars and roof members, and securing structures with connector straps.

15. Similar to the procedures presented for the selection of beneficiaries under Subcomponent A.1, the beneficiaries under this subcomponent will be selected after a national call for expression of interest. The livestock farmers to be supported will be selected based on their productive capacity (technical, financial, and managerial), as well as their willingness to adopt new climate-resilient technologies. Consultants to be hired by the Project will design the model infrastructure to be supported under the Project and assist in adopting storm-resistant standards. With the assistance of the extension agents, assisted by livestock consultants hired under the Project, an investment plan will be prepared outlining all activities to be implemented. The beneficiaries must sign an agreement committing to implementing this plan fully, contributing with their contribution in cash, materials, and labor, supplementing the contribution from the Project. The incentives to be provided to implement the plan by the Project (outside the technical assistance) include building materials, procured by the Project and distributed by MAF, up to a maximum of US$5,500 per beneficiary.

16. To ensure that the beneficiaries effectively co-finance the activities approved in the investment plans and the beneficiary contributions occur in the agreed proportion, the following risk mitigation measures are anticipated: (a) after approval of the investment plan, the beneficiary will sign a letter of commitment or a formal agreement, (b) MAF will oversee the execution of the plans through regular inspections of the sites, ensuring that each activity is executed in the agreed time frame, and (c) to the extent possible, investment plans are split into phases, each of which comprises both a portion of the in-kind support and self-financed activities. By providing the materials in tranches, MAF will verify whether the beneficiary

effectively complies with the agreed plan before moving on to the next phase. Irregularities could cause immediate termination of the plan. These details will be presented in the POM.

17. The expected output of these interventions by the end of the project are: (a) help to provide the basic conditions that would allow for increasing the livestock productive population to levels similar to that before Maria, (b) estimated increase in levels of meat and egg production, and (c) improvements in livestock health interventions expecting to result in reduced mortality rates, as well as increase in weight gain especially in small ruminants and pigs.

18. **Support to fisheries.** The fishery subsector interventions are aimed at stimulating a rapid restoration in the fish supply and restoring livelihoods and revenue streams in the local economy. This subcomponent aims to provide assistance that would contribute to increases in product flow (catch volumes) into value chains, as well as strengthening compliance with better fisheries management regulations. The Project will support about 150 individual eligible fishers who are already members of the local seafood value chain operating within voluntary guidelines. The Project will contribute to consolidating and capitalizing the fishing sector, ensuring rapid recovery from post-storm events in an increasingly challenging global climate. Specific interventions to be supported by the Project include (a) recapitalizing fisherfolk by co-financing the repair of up to a maximum of around 150 boats and (b) recovering around five boat-building facilities.

19. The proposed scheme will be managed by the PIU and operated as follows:

(a) **Boats for fisherfolk.** The beneficiaries will be selected based on a national dissemination and information campaign requesting interested parties to express their interest. The final selection will be done by MAF's Fisheries Department, considering, among others, (a) the good standing of the applicant in the Fisheries Department data collection system and (b) the volume of documented catch of at least 453 kg (1,000 lbs.) within the last 12 months before the hurricane (to be described in detail in the POM). The selected beneficiary will have to sign an agreement with the Project, committing to follow the rules specified in the POM. The beneficiary will compare price quotations for repairing their boat or to build a new one, considering at least three quotations from boatbuilders. Upon agreement with the PIU, the beneficiary will contract the work with the selected boatbuilder and start making the payments under this contract. The PIU will match each one of the payments made to the boatbuilder by the beneficiary, on a *pari-passu* modality, up to 50 percent of the total cost of the boat and subject to a maximum of US$5,500 per boat and per beneficiary household. The fishers will have to cover the rest of the costs of the equipment (engines, fishing gear, and so on), as well as operating costs.

(b) **Boat-building facilities.** An approximate number of five boat-building facilities (according to real demand) will receive support from the Project for rehabilitation or reconstruction of their boat-building facilities. The PIU will call for expression of interest and select the beneficiaries based on their capacity to manage the facility and their experience before the hurricane, as well as the preferences expressed by the selected fisherfolk whose boats will be built/rebuilt. The Project will provide tools and materials up to an equivalent value of US$5,500 per beneficiary and up to 50 percent of the total reconstruction costs of each facility. The beneficiaries boatbuilders will be responsible for the rest of the costs, including all equipment and operational costs. The final beneficiaries will sign an agreement with the

PIU committing to cover these costs of the reconstruction and provide the services to the project beneficiaries. The Project will procure all these inputs and materials needed and distribute them to the boatbuilders.

Subcomponent A.3: Building of Climate Resilience and Agribusiness Capabilities (Total cost: US$2.2 million; IDA: US$1.4 million)

20. **Climate resilience.** To adequately support the investments at the farm level under Subcomponent A.1, the Project will recruit industry experts to prepare development strategies specifically needed for Dominica's context (based on the current situation, vulnerability conditions, relative competitiveness constraints, and development strategy) for key agricultural products (either existent or to be introduced) that will inform investment directions with regard to changing weather patterns and market opportunities, as well as providing long-term development directions for each crop industry. These experts will also train extension agents, rural workers, and farmers in crop production, introduction of new crops varieties, as well as other topics such as climate-smart agricultural practices (for example, adoption of weather-resilient varieties, mulching, and so on), water management and harvesting, marketing, business management, and improved postharvest handling techniques. Market assessments of key crops and subsequent technical advice would facilitate the scoping of potential market opportunities, identify existing constraints and devise potential solutions, and determine the corresponding capacity needs. Therefore, the subcomponent will finance only consulting services (firms and/or individuals), training services, and capacity-building events.

21. Dependent on the type of crop, typical interventions by industry experts could also include the following:

- Developing effective quality standards and quality assurance programs and systems;
- Assessing regional market opportunities and requirements for exports;
- Recommending and supporting the introduction of new, climate-resilient crop varieties considered most suitable for the changing climate in the west Caribbean;
- Assessing capacity needs of all industry stakeholders; and
- Drafting long-term industry development plans for the different value chains in Dominica with high competitiveness for export potential.

22. **Agribusiness**. This subcomponent also contributes to building agribusiness capabilities among small- to medium-size crop and livestock farmers and fisherfolk who would have benefited under Subcomponents A.1 and A.2. Customized training under the subcomponent will target small farmers and fisherfolk who are members of cooperatives or formal APOs. Channeling the specialized training through cooperatives and APOs is essential to maximize results. These legally recognized organizations have the potential to act as aggregators to: (a) serve as a formal channel to marketing and add value to produce from small-scale farmers and fisherfolk, (b) deliver technical assistance to small-scale farmers and fisherfolk, and (c) serve as the country's platform to boost its regional and international agricultural market share. The subcomponent will also retrain MAF's public extension agents and will undertake market and value chain studies required to support the country's medium-term agribusiness development

strategy.

23. Under the implementation mechanism, members of cooperatives and APOs who respond to a call for applications will be carefully and independently selected before being considered to receive the agribusiness training program. Associations and farmer groups comprising women will be encouraged to participate in this training. The PIU and IST will form and lead a Selection Committee to evaluate the applications from prospective beneficiaries against relevant criteria as described in the POM. Public extension officers and other servants of MAF will be required to confirm their desire and commitment to participate in the program. The Selection Committee will review the information provided by the potential beneficiaries and will notify them of its official enrollment in the training program.

24. The Project will hire internationally recruited technical experts to deliver the customized agribusiness training program. Once hired, the consultants will undertake an initial assessment to profile and understand the business development as the basis to design the customized agribusiness training program. In principle, priority thematic areas to be included are the following: (a) agribusiness and market concepts, (b) agricultural value chains, (c) postharvest management, (d) market links, (e) organizational management, (f) incorporation of climate-resilient technologies and practices, and (g) preparation of bankable business proposals and insurance mechanisms. The learning-by-doing training program would include a detailed description of modules, learning objectives, training guides, delivery mechanism, evaluation, and certification procedures and criteria. Special provisions for women's training will include separate trainings, provision of childcare, and the inclusion of thematic areas prioritized by women.

25. As part of the training program, the consultants will deliver agricultural value chain and market analysis for the Government to accumulate knowledge in key areas, including (a) feasibility studies of potential value chains, (b) feasibility studies of potential business plans, (c) comparative analysis of the country's main agricultural value chains, and (d) main barriers and opportunities to enable the business of agriculture, including constraints faced by female-headed households and women-led groups and associations. The proposed set of studies would allow the Government to outline its medium-term agribusiness development strategy.

26. Once implemented, the subcomponent envisages building marketing and agribusiness capabilities among members and key staff of 25 APOs and 50 public officers. The proposed training would maximize the on-farm investments delivered under the Project to restore production. APOs and public extension officers will have the ability to work more effectively and deliver a new business service for small farmers to become more resilient and market-oriented supply chain players. Finally, beneficiaries of the customized training have the potential to develop a new type of job profile to further develop agricultural services and value chains.

27. In line with Dominica's NDC, the main climate benefits and co-benefits, deriving from interventions under Component A, are: the rehabilitation of 2,044 hectares of annual and perennial crops with improved agricultural practices; the transition from traditional to high value and climate resilience systems in 425 hectares of annual and perennial crops; the rehabilitation and resilience enhancement of productive systems for 200 specialized livestock farmers and 150 fisherfolks; the sustainable management of approximately 1,500 hectares of grasslands, ranges and paddocks (corresponding to the 200 specialized livestock farms); and, the use of live fences and plantations in an area equivalent to 100 hectares of grasslands, ranges and paddocks (with trees enhancing land management and livestock nutrition).

Component B: Restoration of Key Productive Infrastructure and Institutional Strengthening (Total cost: US$10.6 million; IDA: US$10.2 million)

Subcomponent B.1: Restoration of Key Infrastructure in Agriculture, Livestock, and Forestry (Total cost: US$8.3 million; IDA: US$7.9 million)

28. This subcomponent will help in the process of restoring key public-sector infrastructure and assets damaged by the hurricane and reestablish the essential public services that farmers depend on. The key areas where reconstruction or rehabilitation of the public infrastructure is needed include (a) five crop propagation centers (including forestry), (b) a CLF, (c) regional offices and training centers, (d) Forestry Division's sylvicultural centers and facilities, (e) reconstruction and rehabilitation of eco-trails, and (e) rehabilitation of two irrigation systems. The rebuilding initiatives with more resilient public infrastructure and higher standards of safety will reduce future climate and weather risks. Therefore, this subcomponent will finance (a) consulting services for engineering design and supervision of works; (b) civil works; (c) equipment, including construction equipment, office and communication, electronic equipment, vehicles, water storage tanks and water distribution; (d) other goods needed for the restoration of eco-trails; and (e) incremental operating costs for the installation of equipment and for the restoration of services by the relevant division of MAF.

29. More specifically, the engineering consultants to be recruited under the Project (probably internationally recruited) will assist in (a) preparing an inventory of the damaged public infrastructure in the sector to support the decision on the priority sites to be reconstructed/rehabilitated; (b) preparing engineering designs for the sites to be considered for reconstruction by the Project, according to disaster-resilient standards such as using particular types of foundations and roof member connector straps, and location to ensure irrigation system safety from flooding and landslides; (c) preparing irrigation designs that address climate risks beyond hurricanes, including better water delivery and reduced waste during the dry season; and (d) supervising the rebuilding or reconstruction by construction firms to be hired for this purpose by the Project.

30. By reconstructing and rehabilitating the crop (including forestry) propagation centers and the CLF, the Project will help restore MAF's essential services for up to 4,900 crop and livestock farmers, fisherfolk, and forestry producers/workers needed for immediate recovery and long-term growth as follows: (a) conservation, propagation, and distribution of indigenous and improved certified genetic materials of important crop, livestock, and forestry species required for a sustainable and resilient farming system in Dominica; (b) research, development, validation, propagation, and supply of planting materials for tree crops (coffee, cocoa, coconut, citrus, mango, and avocado); and (c) demonstration and knowledge dissemination activities on improved resource conservation, as well as agronomical and livestock practices. The subcomponent will finance civil works, equipment, incremental operational costs associated with restoration of agricultural infrastructure and assets, and restoration of essential public services.

31. The capacity of MAF's propagation centers need technical support to build a more efficient and climate-resilient center to hurricane-proof standards. The objective of this intervention is to support the centers in adopting industry best practices in their layouts, logistics, amenities, work platforms, and future planning requirements. Technical expertise will be hired to help design the construction of each propagation center, develop more efficient management and production systems, recommend new directions, and develop a future strategic plan in collaboration with MAF for each propagation center.

Also, technical expertise will advise the possible adoption of new cultivars of cropping species in Dominica that would be more climate resilient over the longer term and meet the quality requirements demanded in identified export markets for those crop varieties.

32. **CLF of MAF.** Emphasis will be on enhancement of the technical capacities of the public CLF in breeding and reproduction, animal nutrition and advanced reproduction technologies, and improved service delivery mechanism. Embryos will be internationally procured by the Project to improve the genetic qualities of the breeding stock. These stocks in turn will be used to improve the genetics of the farmers' herds through setting up seven regional artificial insemination centers. Other activities include fodder promotion and capacity building for officers on breeding technologies and expanding feed production facilities within the CLF, to ensure quality feed supply to the farmers at a reasonable cost.

33. The enhanced infrastructure of the CLF and the regional centers will assist in capacity building of the farmers in areas of improved husbandry management, animal feeding, forage production, breeding, and preventive animal health care. The capacity building will be achieved through FFSs and field demonstrations. In addition, farmers will have demonstrations on manure management practices such as biogas production and composting technologies, which can yield dual benefits of reduction in GHG emissions and production of enriched manure for crop production. Similar measures as described earlier will be undertaken to ensure appropriateness to women's needs.

34. In addition, within the activities of the CLF, the Project will strengthen veterinary public health measures by enhancing the quarantine facility, regular disease surveillance to maintain Dominica's disease-free status for food and mouth disease, classical swine fever and avian influenza, and capacity building of veterinary officers on disease surveillance of animal produce to ensure food safety. The quarantine service will test around 13,000 samples for these diseases. Additionally, 10,000 meat, egg, and fish samples will be screened for microbial quality to ensure food safety.

35. **Forestry.** The Project intends to restore proper access as well as public and community forest ecosystem services lost in the storm and build long-term capacity for comprehensive forest resilience planning. The Project will rehabilitate or reconstruct 130 km of walking trails, as these are major contributions to the local tourism. The Project will rebuild and upgrade government infrastructure that supports the maintenance, promotion, and management of the forests and trails to enable monitoring, research, public outreach, and emergency services. Linked to the rehabilitation and improvement of propagation centers, the Project will also target clearing, salvaging, reforestation and restoration activities in 500 hectares, already identified by the Government as the most vulnerable areas within forest and watersheds (after the passage of Hurricane Maria). Knowledge of Dominica's rainforest ecosystem is insufficient for planning and conservation purposes and no comprehensive strategy exists to protect the biodiversity of Dominica's forests. There is an urgent need for stocktaking and the elaboration of an active management plan that integrates forest ecosystem characterization, community engagement in sustainable use initiatives, and climate change surveillance, especially of hydrological systems.

Subcomponent B.2: Institutional Strengthening and Capacity Building of MAF (Total cost: US$2.3 million; IDA: US$2.3 million)

36. The Project will provide capacity-building assistance to MAF in core areas of (a) managing projects (project M&E, procurement, FM, social and environmental safeguards, and agribusiness); (b) revising policies and regulatory frameworks (risk transfer mechanisms, national certification systems, agricultural

information systems, and revision of the Fisheries Act); (c) conducting several analytical studies on key areas to support ongoing efforts to strengthen the institutional structure of MAF; (d) developing and implementing an e-agriculture strategy for the agriculture, fisheries, and forestry sectors; (e) developing a robust data collection and management system for the fisheries sector; and (f) developing the fisheries community insurance model (building resilience and reducing the potential risks). Items to be procured by the Project include specialized consulting services (individual and firms), training events, and incremental operating costs.

37. In line with Dominica's Intended Nationally Determined Contributions, the main climate benefits and co-benefits, deriving from interventions under Component B, are: the rehabilitation and climate proofing of public infrastructure, including buildings, training facilities, propagation centers, eco-trails and irrigation systems; the clearing (including wood salvaging where possible), reforestation and restoration of 500 hectares in forest and highly vulnerable areas of watersheds affected by Maria (with seedlings from the propagation centers); and, enhanced institutional framework to facilitate coordination/implementation of priority climate change measures and the mainstreaming of climate change activities into national, sectoral and community planning/development.

Component C: Project Management and Coordination (Total cost: US$2.4 million; IDA: US$2.1 million)

38. A PIU will be established within MAF to serve as the unit responsible for the implementation and coordination unit for the Project. The technical divisions of MAF will implement the specific project interventions in close coordination with the PIU under the overall supervision of the PSAF, as specified in the POM. The PIU will report directly to the PSAF and will be responsible for (a) coordinating and implementing all project activities; (b) ensuring that the requirements, criteria, policies, procedures, and organizational arrangements are applied in carrying out the Project; (c) preparing all project implementation documents and reports (except for FM and procurement); (d) preparing all ToRs and technical specifications for bidding documents required to ensure proper project implementation; and (e) establishing a sectoral M&E system for the Project.

39. The IST will be established under MoF to provide shared fiduciary services for all World Bank-financed projects. The IST, headed by the portfolio coordinator, will report directly to the financial secretary of MoF. The IST, in close support of the PIU, will take the lead in carrying out the procurement and FM activities in accordance with the POM and approved Procurement Plan.MoF

40. The Project will finance (a) part of the establishment and operations of the IST (to be shared with other projects, in proportions to be determined), (b) setting up an M&E system, and (c) contracting internationally recruited technical experts in critical project management areas. The Project will also finance dedicated staffing for project activities, agribusiness consultancies, training and related material, office equipment, and incremental operational costs. In addition, it would support development of a communication strategy for the Project to increase awareness and transparency.

Component D: Contingency Emergency Response-CER (US$0 million)

41. This zero-cost component will finance eligible expenditures under the CER to provide immediate response to an eligible crisis or emergency as needed in Dominica. This contingency facility can be triggered through the formal declaration of an emergency by the government authority and upon a formal request from the GoCD to the World Bank through MoF. In such cases, funds from an unallocated category

or other project components will be reallocated to finance emergency response expenditures to meet an eligible crisis or emergency, as needed. The CER will include mitigation, recovery, and reconstruction following natural disasters such as severe droughts, floods, disease outbreaks, and landslides, among others. Implementation of this subcomponent will follow a detailed CER Implementation Plan, subject to World Bank approval, that will be prepared as needed in cases of emergency. The mechanism for declaration of emergency would be in agreement with current local legislation in Dominica. At the moment, the Declaration of the State of Emergency is done by the President of the Commonwealth of Dominica, in accordance with the Emergency Powers (Disaster) Act No. 20 of December 17, 1987, Chapter 15:03 of the revised laws of the country. The Project Operational Manual will include a CER annex.

Table 1.1. Key Eligibility Criteria for Beneficiaries *

Type of Beneficiary	Key Eligibility Criteria
Small farmers	• Annual crops as primary source of income (production essentially directed to consumption and surplus to markets) • Up to 0.8 ha (2 acres); either owned or leased land
Medium-size farmers	• Annual or perennial crops as primary source of income (production essentially directed to markets) • Specialization in selected high-value crops (for example coco, cocoa, avocado, citrus) already inserted in established value chains • 0.8 to 2.03 ha (2 to 5 acres); owned or leased land
Commercial livestock farmers	• Livestock production (poultry, pork, small ruminants, rabbits, and beekeeping) as primary source of income • Owned or leased land • A minimum size of livestock mass according to commodity • Diversified livestock/crop farmers will have to opt for receiving support under one line only.
Commercial fishers	• Registered and in good standing in the Fisheries Department data collection system • Documented catch of at least 453 kg (1,000 lbs.) in the last 12 months of fishing
Commercial boatbuilders	• Documented production of at least 20 boats over the last three years • Selected by beneficiaries based on comparison of quotations

*** Detailed eligibility criteria for beneficiaries will be developed in the Project Operational Manual.**

ANNEX 2: IMPLEMENTATION ARRANGEMENTS

COUNTRY: Dominica
Emergency Agricultural Livelihoods and Climate Resilience Project

Project Institutional and Implementation Arrangements

1. A PSC chaired by the Financial Secretary and comprising the PSAF and Permanent Secretary, Economic Planning, and other relevant ministries/agencies will be established to provide policy directions and interinstitutional coordination, review, and resolve major implementation issues. The committee will approve the annual PIP and requests for budgetary allocations. The final constitution of the PSC will be defined in the POM. The PSAF will act as the secretary of the PSC and liaise between the PIU and the IST to be established within MoF. The PSAF will provide overall coordination of the Project and a full-time project manager will be selected to carry out the day-to-day management to the Project.

2. Overall implementation responsibilities of the Project will rest with the PIU within MAF. The PIU will be responsible for (a) coordinating and implementing all project activities, including with relevant agencies and beneficiaries, as specified in the POM; (b) ensuring that the requirements, criteria, policies, procedures, and organizational arrangements set forth in the POM are applied in carrying out the Project; (c) preparing all project implementation documents, including project reports; (d) drafting all ToRs required to ensure proper project implementation; and (e) monitoring and evaluating the Project. The PIU will be staffed with (a) a project manager, (b) an FM analyst, (c) a procurement officer, (d) social and environmental safeguards officers, (e) an M&E officer, (f) a civil engineer, (g) a communications specialist, and (h) technical officers. The PIU will also recruit short-term internationally selected consultants to provide technical support in critical areas such as program management, monitoring and impact measurement, agribusiness, information technology in agriculture, climate resilience, and crop diversification as needed. The FM analyst and procurement officer will coordinate with the IST and provide all relevant documents and information to carry out the IST's functions. A full description of PIU staffing with roles and responsibilities will be described in the POM. A close collaboration between the PIU and the IST will be ensured.

3. The IST within MoF will have direct responsibility for fiduciary aspects of the Project and advisory responsibility for safeguards aspects of the Project. The IST will be specifically responsible for carrying out the procurement processes and the FM in close coordination with the PIU and in accordance with the financing agreement. In addition, the IST will provide advisory services on social and environmental safeguards procedures in accordance with the financing agreement and will ensure overall monitoring of the project progress and identify issues and bottlenecks to inform the relevant participating agencies. Specialized consultants will be funded on a cost-shared basis among World Bank-funded operations. The IST will be staffed with full-time and/or part-time specialized consultants as follows: (a) a portfolio coordinator, (b) a senior financial manager, (c) two senior procurement specialists, and (d) a social and environmental management specialist. MoF

4. Activities envisaged will require individual consultants on a short-term basis to undertake key preparation—for example, design studies, bidding documents—and implementation activities—for example, training delivered under the FFS program. The PIU with the support of the IST will hire technical experts to deliver the customized agribusiness training program under Subcomponent A.3. In case of gaps

in specific technical skills and institutional capacity, the Project will engage outside (national and international) expertise.

5. **CERC.** The Government will prepare, adopt, and carry out Component D of the Project in accordance with the CERC annex to the POM, which sets forth detailed implementation arrangements for the Component D of the Project, such as (a) the sequence for activating the CERC, (b) specific activities that may be included in the CERC and the procedures for such inclusion, (c) FM arrangements for the CERC, (d) procurement methods and procedures for the CERC, (e) documentation required for withdrawals under the CERC, (f) safeguards instruments required for implementing the CERC, and (g) any other arrangements necessary to ensure proper coordination and implementation of the CERC.

6. This component will be activated upon

(a) The Government's confirmation that an eligible emergency has occurred

(b) Issuance by GoCD of a Declaration of Public Emergency to respond to each eligible emergency, through a proclamation of public emergency in accordance with current Government legislation.;

(c) Furnishing the World Bank with:

(i) A request of assistance to respond to the eligible emergency and

(ii) A CERC Action Plan to respond to said eligible emergency, including the following: the activities to be included in the CERC, safeguards implications and any additional instruments to be prepared, the budget and implementation modalities for the CERC activities and for the preparation of the CERC safeguards instruments, a Procurement Plan and changes, if any, to the CERC annex of the POM; and

(d) Preparation and disclosure of all CERC safeguards instruments in accordance with the CERC annex of the POM and the World Bank's approval on all such instruments.

7. Any activity under the CERC requiring the preparation of a CERC safeguard instrument will be carried out only after any of the actions required under such instruments have been carried out by the Government in a manner satisfactory to the World Bank.

Financial Management

8. The fiduciary design is relatively complex given the low FM capacity in Dominica, which is further exacerbated by the poor overall conditions in the country after Hurricane Maria. The Project implementation will rely on using the existing GoCD IFMIS systems (SmartStream) and overall execution responsibility will rest within MAF. Funds will be released by MoF to MAF accounting head on SmartStream. Funds flow arrangements will be centralized under the responsibility of MoF, which will request the withdrawal of the funds and transfer to MAF (SmartStream). Payment requests will be generated by the PIU (MAF), and Treasury (MoF) will prepare and process payments for the list of selected suppliers. The process will be managed by the PIU, through the MIS, while also accounting and reporting back to MoF (SmartStream).

Overall Financial Management Arrangements.

9. **Staffing.** Currently, MAF has no FM staff with the necessary knowledge on financial systems and procedures (budgeting, accounting, internal controls, and reporting) to manage and oversee the FM requirements of the Project. MAF will establish a PIU to carry out all planned technical activities. However, the Project will rely on FM systems that are currently in place and used by MoF. MoF and MAF will together assign and/or hire FM staff who have the necessary knowledge of all the GoCD finance systems and procedures (budget, accounting, and reporting), are familiar with the applicable World Bank FM requirements, can rapidly support Project implementation, and can meet the requirements and fiduciary responsibilities. These responsibilities include: (a) coordinating and supervising all payments for project activities; (b) submitting disbursement requests and documentation of expenditures to the World Bank; (c) preparing and submitting (unaudited) project interim financial reports (IFRs) to the World Bank; (d) preparing and providing all financial documentation and project reports requested by external auditors and World Bank staff; and (e) preparing, updating, and ensuring that all project executors follow the POM.

10. **Budgeting, accounting, and FM Systems.** The Chart of Accounts provides the framework for identifying, aggregating, and reporting financial transactions for planning, resource allocation, management control, accounting, and evaluation purposes. The Project will use International Public-Sector Accounting Standards and will be cash basis. The Chart of Accounts is an integral component of the Government accounting system, which once combined with the budgetary system, provides the basis for accountability and good governance of results to be achieved with the resources and authorities provided. The budget cycle includes planning and implementation of all government activities. All project budgeting and accounting transactions will run through the GoCD's accounting system.

11. The GoCD uses the IFMIS (SmartStream), which forms the basis of the national classification system and provides information for multiple uses both internal (within ministries) and external (outside ministries). The Chart of Accounts meets the World Bank's standards, as it is in accordance with international best practices,[25] having the proper expenditure commitment procedures and classification. All payments will follow the official commitment, verification, and payment routine. All project costs are properly recorded in the country's integrated FM system.

12. SmartStream will be complemented by an MIS that the Project will establish to ensure full management, control, and reporting of the use of funds. The MIS would be used for M&E, FM, and will particularly help track the investment support provided under projects components. The newly established MIS will be integrated with SmartStream and the financial data will need to be periodically reconciled between the two systems.

13. **Financial reporting.** The FM manager at the IST, with the support of the of the FM analyst at the PIU (MAF), will ensure the timely production of IFRs. These IFRs will be produced from the MIS and SmartStream and will consolidate the project's financial data for all components and be submitted within 45 days after the end of each quarter. The format and content of the quarterly IFRs will be provided in the related project Disbursement Letter.

[25] International Monetary Fund Government Finance Statistics compliant.

14. **External auditing.** The annual project financial statements will be audited by the Office of the Director of Audit, the Supreme Audit Institution of Dominica. The external audit will be conducted under ToR acceptable to the World Bank. The annual audited financial statements will be due to the World Bank within six months after the close of each fiscal year.

15. **Funds flow and disbursement arrangements.** The proposed funds flow and disbursement arrangements will be streamlined within the Project to facilitate execution, avoid unnecessary incremental operational arrangements, and rely, as much as possible, on the existing FM systems and arrangements.

16. The primary World Bank disbursement method will be advances. MoF will continue to be the Designated Account (DA) holder. They will process the request for funds submitted by MAF and will send the withdrawal application to World Bank together with records accounting for advances from the World Bank. World Bank advances funds into the DA and will be released by MoF to MAF's accounting head on SmartStream.

17. Treasury will prepare payments for the list of vendors/suppliers (SmartStream). All funds will flow to vendors/suppliers according to the items procured because the Project will basically provide beneficiaries with goods (that is, inputs packages, materials), works (infrastructure), and consulting (technical assistance). There are two exceptions:

(a) **Repair of boats.** Up to 50 percent of the total cost of the boat and subject to a maximum of US$5,500 per boat and per beneficiary household. The fishers will have to cover the rest of the costs of the equipment (engines, fishing gear, and so on) as well as operating costs. This process should be managed by the PIU using the MIS.

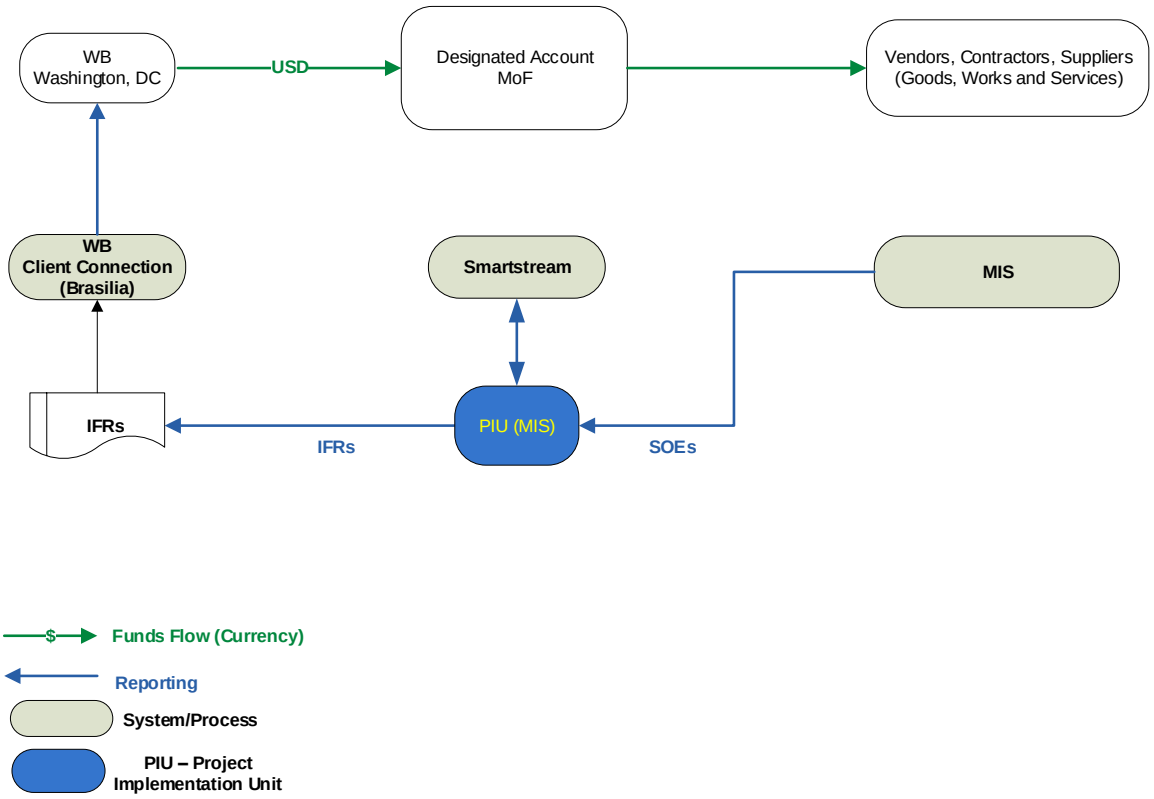
(b) **Boat-building facilities.** The Project will cover (as grant) up to 50 percent of the inputs and materials required for the reconstruction of the facilities and the beneficiaries boatbuilders will be responsible for the rest of the costs, including all equipment and operational costs. The final beneficiaries will sign an agreement with the PIU committing to cover these costs of the reconstruction and provide services to the project beneficiaries. The Project will procure all these inputs and materials needed and distribute them to the boatbuilders.

18. For these two exceptions, disbursements would be made in line with verification of eligibility. Once verified (and properly registered in the MIS), proceeds will be deposited/paid to the selected suppliers, upon payment instructions from the PIU. Such payments will have to be authorized by the PIU. Beneficiaries contributions would be defined in the agreement between the PIU and the beneficiaries and properly registered in the MIS.

19. MAF, through the PIU, processes the payments for the approved beneficiaries and the designated beneficiary contributions to be transferred/paid to the respective supplier, upon receipt of the confirmed list/documentation from the MIS.

20. The PIU will prepare and submit a financial report of disbursements/payments to suppliers and to MoF. MoF and the PIU consolidate all financial information and generate the IFRs.

Figure 2.1. Funds Flow



Disbursements

21. **Disbursement of project funds will be processed in accordance with the World Bank procedures as stipulated in the Disbursement and Financial Information Letter and the Disbursement Guidelines for Investment Project Financing, dated February 2017.** The following disbursement methods will be available. Advance, reimbursement, and direct payment, as defined in the Disbursement and Financial Information Letter, with direct payment being the mandatory payment method under contracts for goods, works, non-consulting services, and consulting services procured or selected through international open or limited competition or Direct Selection, as set out in the Procurement Plan.

22. Advances to MoF will be based on semiannual forecast of expenditures provided in the IFRs to a segregated DA denominated in U.S. dollar and held at a commercial bank to be informed and acceptable to the World Bank. Funds will be transferred periodically from the DA to a project account, which would be denominated in U.S. dollars. The Project will report on the use of the advances through quarterly IFRs showing the actual expenditures incurred by component and subcomponent.

23. Disbursements to respective livestock, fisheries, and forestry development interventions under Subcomponent B.2 will be based on actual expenditures as they are paid and reported by the PIU, based on contracts signed with the beneficiaries and detailed operational procedures established in the POM.

24. The minimum application size for reimbursement withdrawal applications will be US$500,000. The documentation of the use of advances and reimbursement requests will be through IFRs, specified in the Disbursement and Financial Information Letter.

25. **Retroactive financing.** In order to finance eligible project expenditures incurred by the Borrower between March 23, 2018 and the date of signing of the financing agreement, retroactive financing will be allowed up to a maximum of US$1,000,000 from Category 1, comprising up to US$200,000 from IDA Credit and US$800,000 from the CRW Grant.

Table 2.1. Withdrawal of the Proceeds of the Financing

Category	Amount of the IDA Credit No.6231-DM (SDR million)	Percentage of Expenditures to be Financed by the Credit (inclusive of taxes)	Amount of the CRW/IDA Grant No. D306-DM (SDR million)	Percentage of Expenditures to be Financed by the Grant (inclusive of taxes)
(1) Goods, works, non-consulting services, consulting services and operating costs and training for the Project (except grants under parts A.1 and A.2 of the Project)	3.5	100%	6.95	100%
(2) Grants for activities under parts A.1 and A.2 of the Project	0		6.95	100%
(3) Eligible emergency expenditures for part 4 of the Project	0		0	
Total Amount	3.5		13.9	

Note: Equivalent SDR amounts approximated to nearest 100,000; Rate: USD1=SDR0.69161554.

Procurement

26. **Procurement under the project will be conducted in accordance with the World Bank's 'Procurement Regulations for IPF Borrowers' (July 2016, revised November 2017) and with reference to the 'World Bank Guidance: Procurement in Situations of Urgent Need of Assistance or Capacity Constraints' (July 22, 2016)**, for how to support operational procurement in Situations on Urgent Need of Assistance or Capacity Constraints described under paragraph 12 of the Bank Policy on Investment Project Financing on "Projects in Situations of Urgent Need of Assistance or Capacity Constraints" . The Project is subject to the World Bank's Anticorruption Guidelines, dated October 15, 2006, and revised in January 2011, and on July 1, 2016.

27. The Project is being prepared under the paragraph 12 of the Bank Policy on Investment Project Financing on "Projects in Situations of Urgent Need of Assistance or Capacity Constraints" due to the urgent need of assistance to the agriculture sector in the country, following Hurricane Maria. The Project will also make appropriate use of the increased flexibility provided for in the guidance above indicated, due to the weak procurement capacity of the Borrower.

Procurement Assessment of the Implementation Agency

28. A procurement assessment was carried out to evaluate adequacy of existing procurement arrangements related to the implementation of the Project. The Project will be implemented by MAF. This assessment is with respect to the proposed procurement arrangements and may require a reassessment during implementation if there are changes to those arrangements. The objective of the assessment was to determine whether MAF has acceptable procurement arrangements in place to adequately undertake the procurement function required under the Project.

29. The assessment concluded that, at this moment, there is no dedicated procurement function within MAF and no viable implementation arrangements were identified within the implementation agency. Further, it is noted that MAF has some previous experience in implementing international donor-funded projects. However, all the projects so far implemented by MAF, were overseen by dedicated PIU's formed exclusively to support the specific project and the capacity after project conclusion was not retained.

30. Procurement undertaken in MAF, is decentralized (undertaken by the various staff of the ministry) and legislated under the Public Procurement and Contract Administration Act 11 of 2012, and mainly based on Shopping or Direct Contracting procedures. Although MAF conducts procurement, above a certain threshold, it requires approval and official clearance from MoF.

Proposed Implementation Arrangements for the Project

31. Due to the identified lack of capacity within MAF to implement the Project, several options were analyzed on how better to address this issue. At the level of MoF, an IST is proposed to be established to provide assistance and implementation support in procurement and fiduciary management. The IST will serve as a shared resource for all the emergency World Bank-funded projects in Dominica. The IST will provide executive procurement services directly to the PIU for the conduct of procurement of all works, goods, and consulting and non-consulting services. The costs of this unit would be supported by the three projects.

32. It is further proposed that procurement officers will be incorporated into the PIUs created within the respective line ministry, with the mandate to provide the administrative support to the procurement function allocated in the IST. The procurement officers engaged at the PIU level will provide the necessary support to the procurement function at the IST level and serve as the key liaison between the PIU and the IST concerning procurement.

33. The IST will engage two highly qualified and experienced procurement specialists. The consultants will need to have previous experience with International donor-funded projects and knowledge of the World Bank Group Procurement Regulations so that they can rapidly support project implementation and ensure adherence to the procurement regulations of the World Bank.

34. Based on previous experience in the country, it is understood that the required profile of these consultants may not be available in the island. Therefore, it is proposed that the procurement of these consultant positions, be undertaken through an open market approach, ensuring wide advertisement of the position, including in procurement specialized publications, and that adequate budget be allocated to support international hiring.

35. The IST needs to work in close collaboration and dialogue with the technical staff allocated to the PIU. The technical inputs as ToR and technical specifications, necessary to the procurement packages, will

be prepared at the PIU level. It is noted that there is a (a) lack of institutional experience in preparing ToR or technical specifications and (b) lack of experience in the evaluation process of bids and proposals. It is, therefore, recommended that external consultants are engaged to support MAF in developing ToR, technical specifications and support the team during bid evaluation.

Procurement Plan and Project Procurement Strategy for Development

36. According to 'World Bank Guidance: Procurement in Situations of Urgent Need of Assistance or Capacity Constraints' (July 22, 2016), the fiduciary requirements that are normally required during the preparation were deferred to the implementation stage. As it is the policy in such cases, a simplified PPSD and initial Procurement Plan are considered adequate before project approval and the completion of the detailed Project Procurement Strategy for Development (PPSD) and Procurement Plan for the entire project will be prepared at early stages of implementation.

37. According to the Procurement Regulations paragraph 4.3, the Borrower prepares a high-level, simplified PPSD in situations of urgent need of assistance because of a natural or man-made disaster or conflicts recognized by the World Bank, provided that the simplified procurement arrangements in the PPSD are consistent with the World Bank's core procurement principles.

38. Consequently, a combined simplified PPSD for the three emergency projects was drafted by the Government with the World Bank's support and was agreed upon. The PPSD also informed the initial Procurement Plan.

39. An initial Procurement Plan, prepared by MAF with the World Bank's support and approved by the World Bank was incorporated by reference in the Legal Agreement, making it legally binding on the Borrower.

Procurement Arrangements for the Project

Component A: Restoration of Productive Base for Recovery of Agricultural Livelihoods

Subcomponent A.1: Restoration of Cropping Systems

40. This subcomponent will finance the urgent need of goods as fertilizers, seeds, and agricultural and transport equipment necessary in the island. Due to the immediate need identified, several Request for Quotations for different inputs and equipment will be issued as immediate and rapid procurement actions to answer the needs for the period 0–3 months of the Project. A detailed market assessment needs to be undertaken as preparatory activity to identify the firms which can provide the goods, in the required quantities, and within the required timing, to be invited to provide a quotation. In parallel a Request for Bids, estimated in the value of US$2.5 million, will be prepared to answer the three to six months project life cycle requirements for a fertilizers goods package. It is being proposed that all these packages be issued targeting the international market due to the unavailability of those goods in the island. Under this subcomponent, it is envisaged that the Project will also finance a goods contract for medium- and long-term agriculture inputs, which scope will be defined under the Technical Advisory Consultancy (Subcomponent A.3), in the estimated value of US$770,000. It is envisaged that this contract will be procured through an Open International Market Approach, using Request for Bids as the selection method.

Subcomponent A.2: Restoration of Livestock and Fisheries Systems

41. A matching grant system for the rehabilitation of boats in a value of approximately US$880,000 will be financed under this subcomponent. It is proposed that MAF prequalify a panel of qualified contractors to provide those services. The beneficiaries will undertake the downstream procurement by a simplified Request for Quotations among the contractors included on the panel. They will be assisted in this process by the PIU. The procurement procedures applicable to the grants will be included in the POM and should include the form of contract to be used.

42. Under this subcomponent, the identified emergency needs will be procured using the similar approach followed under Subcomponent A.1, Request for Quotations. Those include the urgent requirements for agriculture construction materials to be distributed among the beneficiaries. Those were identified as immediate requirements and will be procured first. A detailed market assessment needs to be undertaken as a preparatory activity to identify the firms which can provide the required goods, in the required quantities, and within the required timing, to be invited to provide a quotation.

Subcomponent A.3: Building of Climate Resilience and Agribusiness Capabilities

43. This subcomponent will finance two consultancy services, one being a major training services firm to deliver the customized agribusiness training program in the value of US$850,000. Once it is hired, the firm will undertake an initial assessment to profile and understand the business development as the basis to design the customized agribusiness training program. It is being envisaged that this firm will be procured under an Open International Market Approach and by using the Quality- and Cost-Based Selection.

Component B: Restoration of Key Productive Infrastructure and Institutional Strengthening

Subcomponent B.1: Restoration of Key Infrastructure in Agriculture, Livestock, and Forestry

44. This subcomponent will restore the following key infrastructures and assets completely or partially damaged by the hurricane and reestablish the essential public services: (a) five crop propagation centers (including forestry), (b) a CLF and training center, (c) forestry office buildings, (d) rehabilitation of community-based irrigation system; and (e) restoration/reconstruction of eco-trials.

45. It is envisaged that a combined design and supervision consultancy services contract will be procured, in the estimated value of US$350,000 under the Open International Market Approach, using the Selection based on the Consultants' Qualifications method, according to paragraph 7.12 of the Regulations for Emergency Situations.

46. This subcomponent will also finance two separate works contracts (due to the identified scope and different target construction market)—one for the reconstruction of propagation centers, CLFs, training centers, and forestry office buildings at the estimated value of US$2.6 million and a smaller works contract for the reconstruction of the irrigation centers in the estimated value of US$190,00. The larger contract is envisaged to be procured under the open national market approach and using the Request for Bids. The smaller contract will be procured using the Request for Quotations.

47. Under this subcomponent the identified emergency needs will be procured, using, the similar approach followed under Subcomponent A.1, Request for Quotations. Those include the urgent

requirements for agriculture equipment and tools and machinery to restore forest reserves. Those were identified as immediate requirements and will be procured first. A detailed market assessment needs to be undertaken as a preparatory activity to identify the firms which can provide the required goods, in the required quantities, and within the required timing, to be invited to provide a quotation.

48. Other goods to be financed under this subcomponent include the (a) office equipment to the buildings above reconstructed and (b) the equipment for the CLF strengthening. This last activity is still under review and the scope will only be defined at a later stage, and it is envisaged that the package may be further subdivided into sub-packages based on the requirements and market analysis.

49. The reconstruction and reopening of the eco-trail network will also be financed under this subcomponent in the value of US$1.6 million. This network is spread all over the island, and the Project is exploring the possibility to engage local labor, to provide the necessary workforce for this activity.

Subcomponent B.2: Institutional Strengthening and Capacity Building of MAF

50. This subcomponent will finance six separate consulting services packages. Those include three separate contracts for development of analytical work for fisheries and forestry, in the total value of US$600,000. Those three consultancy services will be procured under Quality- and Cost-Based Selection, using the Open International Market approach due to the unavailability of firms with the required profile in the country. Further, the subcomponent will also finance the envisaged agriculture census to be procured under Least Cost Selection and Open International Market Approach.

51. Further under this component is also envisaged the engagement of consultancy services firm to prepare the strategy and input as Technical Advisory for Medium Term Development Strategy with the estimated value of US$600,000. This consultancy services firm will be engaged through the Open International Market Approach and using the Quality- and Cost-Based Selection.

52. The Project will also provide a technical assistance to MAF in (a) its ongoing efforts to strengthen the institutional structure of MAF and (b) developing and implementing an e-agriculture strategy for agriculture, fisheries, and forestry sectors. This activity is estimated in US$700,000, and is envisaged to be procured as Quality- and Cost-Based Selection using the Open International Market Approach due to the unavailability of firms with the required qualifications in the country.

53. Goods to be financed consist of information systems to be developed as part of the M&E system in the value of approximately US$300,000. Those are envisaged to be procured under Request for Bids and Open International Market Approach.

Component C: Project Management and Coordination

54. The Project will finance: (a) the establishment and operations of the PIU and the IST, (b) setting up of an M&E system, and (c) contracting of internationally recruited technical experts in critical project management areas. Under the PIU, dedicated individual consultants for project support, agribusiness consultancies, training and related material, office equipment, and incremental operational costs will be financed. This component would also co-finance (co-sharing with the other two emergency projects - Housing Recovery Project (P166537) and Additional Financing for the Disaster Vulnerability Reduction Project (P166540)- being prepared in the country) the proposed IST under MoF. Based on previous

experience in the country, it is understood that the required profile for those positions may not be available in the island. It is envisaged that these shared resources would need to be international hires.

55. Goods to be financed include information systems to be developed as part of the M&E system in the aggregate value of US$350,000. Those are envisaged to be procured under Request for Bids and Open International Market Approach.

Component D: Contingency Emergency Response-CER (US$0 million)

56. This zero-cost component will finance eligible expenditures under the CER to provide immediate response to an eligible crisis or emergency as needed in Dominica. This contingency facility can be triggered through the formal declaration of an emergency by the government authority and upon a formal request from the GoCD to the World Bank through MoF. In such cases, funds from an unallocated category or other Project components will be reallocated to finance emergency response expenditures to meet an eligible crisis or emergency, as needed. The details of this subcomponent need to be clear described in the CERC Operations Manual, including the mechanisms and the procurement arrangements under tis conditions and acceptable to the World Bank.

Procurement Risk and Supervision

57. **The overall procurement risk rating is Substantial,** based on the assessment of MAF capacity to carry out procurement under the Project, the complexity of the procurement arrangements, the large number of planned procurement transactions and MAF's lack of experience of the implementation agency in World Bank-funded projects. The risk will be mitigated by ensuring that the following actions are implemented:

(a) MoF will urgently engage the services of highly qualified and specialized procurement specialists to staff the proposed IST. The consultants need to have previous experience with International donors-funded projects and knowledge of the World Bank Group Procurement Regulations so can rapidly support project implementation and ensure adherence to the procurement regulations of the World Bank.

(b) A procurement officer engaged at the PIU level must provide the necessary procurement implementation function supported by close, hands-on executive procurement services from the IST and serve as key liaison between the PIU and the IST concerning procurement.

(c) Ensure definition and consensus of interinstitutional agreements that includes clear roles and responsibilities between MoF, MAF, and the new IST to ensure timeliness of the implementation of the Procurement Plan and avoid delays on the procurement cycle.

(d) It is recommended that external consultants be engaged to support MAF in developing ToR, technical specifications, and support the team during bid evaluation stage.

(e) Update the procurement arrangements in the POM that are acceptable to the World Bank and which clearly define roles and processes applicable to the Project.

58. The World Bank's procurement accredited specialists assigned to the Project, will monitor the procurement risk during implementation and will support, train, and guide the Borrower's procurement

team assigned to the Project. The procurement performance will be monitored during implementation supervisions and additional measures may be recommended if deemed necessary.

Environmental and Social (including safeguards)

59. The Project is being designed under the World Bank's Condensed Procedures contained in the paragraph 12 of the Bank Policy on Investment Project Financing on "Projects in Situations of Urgent Need of Assistance or Capacity Constraints". The passage of Hurricane Maria in September 2017, which significantly destroyed public and private assets and livelihoods across all sectors of the country, satisfies the requirements for the Project to be designed under the paragraph 12 of the Bank Policy on Investment Project Financing on "Projects in Situations of Urgent Need of Assistance or Capacity Constraints" . Once paragraph 12 is triggered, the safeguards preparation may be deferred until an appropriate time. An SAP is prepared with instruments and timing of their disclosure agreed to with the Government.

60. The social and environmental impacts will be positive for Dominica's agricultural sector of Dominica. The Project will improve sector-specific affected communities such as farmers, fisherfolk, livestock producers, and forestry communities by restoring critical farm infrastructure, strengthening livestock facilities based on new designs, and improving crop varieties that will potentially make crops more resilient. Similarly, potential improvements are likely in the fishing sector through capacity enhancements with respect to helping fisherfolk rebuild better boats, making new arrangements for securing of boats, and engaging in better fishing practices. There are, however, potential adverse socioenvironmental impacts associated with rehabilitation and construction of on-farm facilities. The following policies described in the following paragraphs will be triggered.

61. **OP 4.12 - Involuntary Resettlement will be triggered.** No land acquisition or physical relocation of households will be undertaken in the Project. However, some investments could have unintended impacts on livelihoods (for example, expanding the area under cultivation could have an impact on livelihoods of tenant farmers). A Social Action Plan h indicates what instruments will be prepared and their timing to mitigate against any impacts on assets or livelihoods. These will include: (a) an environmental and social screening checklist to ensure there is no physical relocation and (b) a simple template for site-specific mitigation measures, including simple ARAPs. The Project will also rehabilitate and clear existing forest trails and provide alternative routes for those that are determined to be unsafe or dangerous to traverse. Guidelines will be developed to secure consent to traverse land that is privately owned. No new restrictions to forests are anticipated and indeed, in consultations with farmers, the opening of these trails for ecotourism and access to farms was a priority.

62. **The project will trigger OP 4.10 - Indigenous Peoples.** Dominica's indigenous community, the Kalinago, is among the locations where project investments will be made. Impacts are overall expected to be positive. The main risks are to ensure that farmers who meet the eligibility criteria can participate and receive the benefits packages and technical assistance. The IPP will comprise a rapid social assessment that will inform the communication strategy and outreach plan to ensure that residents of the Kalinago Territory are provided the appropriate crop packages and are aware of the Project and to educate them on how to participate using culturally appropriate channels to ensure their FPIC. The outreach strategy will be prepared/updated and disclosed with the POM. Based on consultation feedback from the Kalinago community, the IPP will ensure that indigenous council leadership are involved in policy and decision-making discussions and beneficiary selection processes to avoid lack of representation. The project design

is flexible to accommodate their preferences for crop and other livelihood packages. The IPP will be prepared/updated and disclosed within 12 weeks of effectiveness and be included in the POM.

63. **Citizen engagement.** The project's communication and outreach strategy will be the key tool for citizen engagement, with emphasis on early outreach to key stakeholder groups before start-up activities and through ongoing communications around selection of beneficiaries in a transparent manner, during implementation. The strategy will include specific engagement with the Kalinago community through their council.

64. **Environment**. The Project is considered Category 'B' and OP 4.01, Environmental Assessment is triggered. The key reconstruction activities under Component B are (a) five crop propagation centers (including forestry), (b) a CLF, (c) regional offices and training centers, (d) Forestry Division's sylvicultural centers and facilities, (e) building reconstruction and rehabilitation of eco-trails; and (f) rehabilitation of one community irrigation system. These rehabilitation works are expected to be small to medium scale, generating only minor and localized environmental impacts that can be easily identified, mitigated, and managed. They will include debris management, worker's health and safety, soil stabilization, and erosion control. Consequently, no significant or irreversible environmental impacts are anticipated due to the project-financed activities.

65. Under Component A, the Project will also support the recovery of the production capacity of small- and medium-size crop farmers providing: (a) an essential package of inputs (key quality seeds and fertilizers), tools, and materials for the replanting or restoration of their crops and (b) technical and advisory services and training to support the adoption of technology and use of climate-smart practices increasing diversification and climate resilience. As part of the livestock interventions, the Project will assist 200 livestock producers through investment support to restore the damaged animal housing and other infrastructures for production of poultry (layers and broilers), goats, sheep, rabbits, and pigs, and beekeeping. The fisheries interventions will support the rehabilitation of boats for fisherfolk (up to a maximum estimated of 150 boats and boat-building facilities. All these activities have minimal environmental impacts that can be easily mitigated by complying with the best agricultural, livestock, fisheries, and environmental practices and by following the General World Bank Group EHS Guidelines and the specific industry World Bank Group EHS Guidelines for the agribusiness and food production as well as for the forestry sector.

66. Given the Project's focus on rehabilitating existing infrastructure, no impacts on natural habitats are expected and no significant conversion or degradation of critical or natural habitats will occur. Nonetheless, as there are interventions in the forestry sector and natural parks (restoration of 130 km of trails) Natural Habitats (OP/BP 4.04) and Forests (OP/BP 4.36) have been triggered. In addition, the Pest Management (OP/BP 4.09) policy has been triggered as pesticide, insecticides, and fertilizers will be purchased for the farmers. The instruments to manage these policies and management plans will be developed under OP 4.01.

67. In line with paragraph 12 of the Bank Policy on Investment Project Financing (allowing for deferral of certain safeguards requirements to after project appraisal), an SAP was prepared and is detailed in annex 6. The SAP provides a road map for preparation of safeguards instruments to ensure identification and management of environmental issues and risks relating to project implementation. The SAP will include a negative list to exclude any potential 'Category A' investment.

68. A GHG assessment was conducted using the EX-ACT tool with inputs from the project preparation process, to estimate (a) the total GHG impact of project implementation as compared to a business-as-usual scenario and (b) the GHG emissions intensity of production systems before and after project implementation. As the analysis results show, in 20 years, the time frame of project implementation plus capitalization, the Project leads to the net sequestration of 194,848 tCO_2e, considering the business-as-usual baseline scenario. This is equivalent to a net reduction of 2.3 tCO_2e per hectare and per year. The project brings considerable benefits in climate change mitigation when compared to the business–as-usual scenario. The EFA of the project valuates these benefits according to the World Bank guidelines.

Monitoring and Evaluation

69. An M&E specialist at the PIU will coordinate monitoring activities by the technical divisions of MAF and to oversee activities. A results-based M&E system would monitor project implementation using the following methods and tools: (a) Results Framework derived from clearly identified project objectives and activities with corresponding indicators (with baselines and targets), means of verification, and key assumptions; (b) an M&E strategy regarding information requirements, tools, and methodologies for data collection, analysis, and reporting; (c) a comprehensive M&E plan with clear roles and responsibilities with respect to data collection and reporting; and (d) internal and external periodic assessments, verification exercises and evaluations, which include baseline studies, beneficiary assessments, midterm evaluations, and ex post evaluation including at project completion. The heads of the participating technical divisions will be responsible for process and performance monitoring of individual activities and will consolidate and analyze all M&E data provided by the field-level offices. The M&E specialist will monitor all field-level activities, identify issues, and propose needed actions for the management to address them. The PIU will produce monthly reports.

70. The project M&E will include an MIS that (a) records direct beneficiaries; (b) tracks physical implementation and provides the information needed to report on the Results Framework; (c) records critical procurement processes; (d) complements the Government's accounting system recording specific data such as monetized counterpart contribution (see FM section for further information); and (e) regularly tracks and keeps updated all complaints received through the project specific grievance redress system, status of each complaint, and data on timeliness and volume of complaints addressed satisfactorily.

71. The PIU will (a) compile and consolidate data and verification documents, (b) ensure data quality, and (c) prepare and submit the reports to the World Bank on time. To do so, the PIU will hire an M&E specialist who will closely coordinate with the IST in charge of tracking progress and consolidating information at the portfolio level.

72. To report on the Results Framework, data will be collected by the technical divisions and, in some cases, by external consultants, civil society actors, or firms, through multiple mechanisms such as technical audits that include field verification and beneficiary consultation, surveys, and remote sensing. Data on investment support will be gathered on an ongoing basis during implementation, as part of the workflow of each of the schemes. The POM will provide technical specifications and protocols for the beneficiary records, as part of the MIS.

ANNEX 3: IMPLEMENTATION SUPPORT PLAN

COUNTRY: Dominica
Emergency Agricultural Livelihoods and Climate Resilience Project

Strategy and Approach for Implementation Support

1. The World Bank's implementation support will focus on (a) monitoring the project implementation progress and evaluating results on the ground; (b) addressing the principal risks (technical, fiduciary, and environmental and social risks); and (c) providing the necessary technical advice in improved agriculture technologies, building climate resilience in agriculture production system, and postharvest management. The project implementation will be reviewed by the World Bank's Implementation Support Missions (ISMs) and the support will also be provided also through continuous exchange of correspondence and regular communications.

2. **Procurement.** Implementation support will include: (a) reviewing the procurement documents and providing timely no objection, (b) providing detailed guidance on the World Bank's Procurement Regulations to the project staff, (c) monitoring procurement progress against the detailed Procurement Plan, (d) reviewing contract management activities, and (e) identifying the capacity-building/training need for project staff and officials of the state power utilities on procurement processing and providing training, if required.

3. **FM.** The ISM will review the project's FM system, including but not limited to accounting, reporting, and internal controls. The support will be provided through regular interactions, half-yearly ISMs, and thematic ISMs, if required.

4. **Environmental and social safeguards.** The World Bank safeguards specialists in the team will provide implementation support for monitoring the various activities for ensuring compliance with the World Bank's operational policies/procedures and the agreed readiness criteria for activities related to environment and social safeguards aspects. The implementation support will be provided through regular interactions, half-yearly ISMs, and thematic review missions if required. The safeguard specialists will undertake field visits and support the Project Management Unit's capacity for safeguards management and implementation of mitigation action.

Implementation Support Plan and Resource Requirements

5. The project implementation support will be conducted through the following activities:

- At least two regular ISMs in a year during the project duration
- Intermediate technical missions by specialist, as needed
- Quarterly implementation progress reports (physical and financial progress) prepared by the PIU
- A midterm review once the Project is around halfway in project implementation/loan tenure, to review the progress and assess the need for any midcourse correction

- An Implementation Completion and Results Report at the end of the Project to assess achievement toward the PDO and lessons learned

6. The Implementation Support Plan, given in tables 3.1 and 3.2, indicates the focus areas and skill needs required to provide implementation support during the initial and subsequent periods of the Project. It will be reviewed regularly and updated as and when required during the implementation.

Table 3.1. Focus of Support to Project Implementation

Time	Focus	Skills Needed	Resource Estimate (US$)
Year 1	• Implementation arrangement • Validation of the PIP for year 1 • Quality control processes • FM systems functioning effectively • Procurement practices following the World Bank norms • Environment and social safeguards • Technical support on specifics of the PIP	• Agriculture specialist • Fisheries specialist • Livestock specialist • Agribusiness specialist • Social safeguards • Environmental safeguards • FM specialist • Procurement specialist • M&E specialist • ICT specialist	120,000
Year 2	• Technical support for implementing activities per component and subcomponent • Routine FM and procurement reviews • Management of safeguards and monitoring of implementation of safeguards-related measures • M&E • Adjustment of plan for implementing activities per component and subcomponent	• Agriculture specialist • Fisheries specialist • Livestock specialist • Agribusiness specialist • Social safeguards • Environmental safeguards • FM specialist • Procurement specialist • M&E specialist • ICT specialist	120,000
Year 3	• Midterm review • Technical support for implementing • Routine FM and procurement reviews • Management of safeguards and monitoring of implementation of safeguards related measures • M&E • Conducting of midterm review	• Agriculture specialist • Fisheries specialist • Livestock specialist • Agribusiness specialist • Social safeguards • Environmental safeguards • FM specialist • Procurement specialist • M&E specialist • ICT specialist	160,000

Time	Focus	Skills Needed	Resource Estimate (US$)
Years 4	• Adjustment to the PIP • FM and procurement reviews • Management of safeguards and monitoring of implementation of safeguards-related measures • M&E	• Agriculture specialist • Fisheries specialist • Livestock specialist • Agribusiness specialist • Social safeguards • Environmental safeguards • FM specialist • Procurement specialist • M&E specialist • ICT specialist	Year 4: 200,000
Years 5	• Adjustment to the PIP • FM and procurement reviews • Management of safeguards and monitoring of implementation of safeguards-related measures • M&E • Final Evaluation report; • FINAL ICR	• Agriculture specialist • Fisheries specialist • Livestock specialist • Agribusiness specialist • Social safeguards • Environmental safeguards • FM specialist • Procurement specialist • M&E specialist • ICT specialist	Year 4: 250,000
Total Cost			850,000

Note: ICT = Information and Communication Technology.

Table 3.2. Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task team leader/Agriculture economist	10	2	Based in Washington, DC
Co-task team leader/Irrigation specialist	10	2	Based in Country office
Agriculture/Irrigation economist	6	2	FAO/World Bank CP
FM specialist	4	2	Based in Washington, DC
Agribusiness specialist	4	2	Based in Country Office
Fisheries/Forestry specialist	4	2	Based in Washington, DC
Livestock specialist	4	2	Consultant
Procurement specialist	4	2	Based in Washington, DC
Environmental safeguards specialist	4	2	Based in Washington, DC
Social safeguards/Social development specialist	4	2	Based in Washington, DC
ICT specialist	2	2	Consultant
M&E specialist	4	2	—
Counsel	2	1	Based in Washington, DC
Operation analyst	4	2	Based in Washington, DC
Team assistant	10	—	Based in Washington, DC

Note: CP = Collaboration Program; FAO = Food and Agriculture Organization.

Table 3.3. Government Counterparts

Name	Institution/Country	Role
Dr. Reginald Thomas, Permanent Secretary	Ministry of Agriculture and Fisheries	Project Coordinator

ANNEX 4: GREENHOUSE GAS ASSESSMENT

COUNTRY: Dominica
Emergency Agricultural Livelihoods and Climate Resilience Project

1. In its 2012 Environment Strategy, the World Bank adopted a corporate mandate to conduct GHG emissions accounting for investment lending. The quantification of GHG emission is an important step in managing and ultimately reducing GHG emission and is becoming a common practice for many international financial institutions. The World Bank adopted the EX-ACT, which was developed by the FAO in 2010, to assess the impact of agricultural investment lending on GHG emission and carbon sequestration. EX-ACT allows the assessment of a project's net carbon balance, defined as the net balance of CO_2 equivalent GHG that were emitted or sequestered because of project implementation compared to a without project scenario. EX-ACT estimates the carbon stock changes (emissions or sinks), expressed in equivalent tons of CO_2 per hectare and year.

2. The Dominica Emergency Agricultural Livelihoods and Climate Resilience Project (P166328) is a World Bank-funded project proposal that aims to contribute to restoring agricultural livelihoods and enhancing climate resilience of farmers and fisherfolk affected by Hurricane Maria in Dominica. The Project will be implemented in a four-year time frame, starting in 2018. Project interventions are organized into four main components:

(a) Component A: Restoration of Productive Base for Recovery of Agricultural Livelihoods

(b) Component B: Restoration of Key Productive Infrastructure and Institutional Strengthening

(c) Component C: Project Management and Coordination

(d) Component D: Contingency Emergency Response

3. To this extent, the analysis set forth will use the Ex-ACT tool to assess the GHG impacts associated with the activities contemplated in the Project.

Application of EX-ACT

4. **Project boundaries.** The GHG accounting considers the following:

- The rehabilitation of 2,044 ha of annual and perennial crops (1,335 ha of annual crops and 1,133 ha of perennials with improved agricultural practices)
- The transition from traditional to high-value and climate-resilience systems in 425 ha of annual and perennial crops
- The rehabilitation and enhancement of productive systems for 200 specialized livestock farmers and 150 fisherfolk

- The sustainable management of approximately 1,500 ha of grasslands, ranges, and paddocks, corresponding to the 200 specialized livestock farms covered by the Project under Subcomponent A.2

- The use of live fences and plantations in an area equivalent to 100 ha of grasslands, ranges, and paddocks (with trees enhancing land management and livestock nutrition)

- The reforestation and restoration of 500 ha in forest and highly vulnerable areas of watersheds affected by Hurricane Maria

- The rehabilitation and improvement of government and productive infrastructure, including buildings, training facilities, propagation centers, eco-trails, and irrigation systems

5. **Data source.** The main sources of data used to carry out the analysis include information generated in the EFA as well as technical inputs prepared by MAF. These inputs provide, among others, a detailed assessment on the technical packages on crop, agroforestry, forest restoration and livestock production systems that will be supported by the Project.

6. **Basic assumptions**. Dominica has a tropical climate and moist regime. The dominant soil type is volcanic soil. The time frame of project implementation is 4 years and the capitalization phase is 16 years, thus the analysis period is set for a total of 20 years. The initial situation reflects the losses and damages inflicted by Hurricane Maria in the agriculture sector. The 'without project scenario' assumes the recovery of the pre-Maria situation under a liner s-curved dynamic. In the case of activities envisaged in Subcomponents A.1 and A.2, the 'with project scenario"', assumes an immediate recovery dynamic to the pre-Maria situation but incorporates improvements in terms of agricultural practices. Regarding activities under Subcomponents A.1 and A.2, the 'with project scenario', assumes an exponential growth dynamic (reflecting the incentives provided during project implementation) and incorporates considerable improvements in the management options of crop, livestock, and fisheries systems.

7. **Crop production.** The technical packages proposed for both annual and perennial systems incorporate 'improved nutrient management', which are accounted for in EX-ACT. It is expected that some changes in cropping patterns may be promoted, including production of annual crops to perennial, intercropping patterns and an increase in cropping intensity. In the latter case, more intensely used cropping, this is indicated in EX-ACT through the selection of 'improved agronomic practices'. All management options are available in the EX-ACT module 'Crop production':

- The management options that will be employed in 1,335 ha of annual crops—approximately 954 ha of tubers and 381 ha of roots and vegetables—are shown in table 4.1. Climate-resilient systems, include improved, agronomic practices, nutrient management, no till and residue retention, manure application as well as water management. The Project investments for the rehabilitation of crop areas would support improvements in agronomic practices and manure application compared to traditional systems, but it will not necessarily include improvements in water management. This would depend on the availability of water sources, irrigation systems, and other alternatives complemented trough government facilities and/or private investments.

Table 4.1. Management Options for Annual Crops

System	Management Options				
	Improved Agronomic Practices	Nutrient Management	No Till and Residue Retention	Water Management	Manure Application
Climate-resilient tubers production	Yes	Yes	Yes	Yes	Yes
Rehabilitation of tubers production	Yes	Yes	Yes	No	Yes
Traditional tubers production	No	Yes	Yes	No	No
Climate-resilient roots, vegetable, and horticulture production	Yes	Yes	Yes	Yes	Yes
Rehabilitation of roots, vegetable, and horticulture production	Yes	Yes	Yes	No	Yes
Traditional roots, vegetable, and horticulture production	No	Yes	Yes	No	No

- Approximately, 1,133 ha of perennial plantations will be supported by the Project, following best agroforestry practices (in this GHG analysis, perennials include plantain and various fruit trees).

- Improved agricultural and agroforestry practices are framed within the climate-smart agriculture approach.

8. **Livestock.** The Project will support restocking of small ruminants, poultry, pigs, and cattle (dairy and beef). The Project is expected to introduce improved feeding (20 percent to 25 percent of improved feeding, depending of the livestock category) through the support of forage production. It will also promote improved breeding and other management practices among the 200 specialized livestock farms targeted under Subcomponent A.2.

Table 4.2. Livestock and Manure Management

Livestock Categories	Head Number (mean per year)			Technical Mitigation Option (%)								
	Start	Without project	With project	Feeding practices*			Specific Agents*			Breeding*		
				Start	With out	With	Start (%)	With out	With	Start	With out	With
Dairy cattle	100	200	200	0	0	25	0	0	25	0	0	100
Other cattle	700	1,300	1,300	0	0	20	0	0	20	0	0	100
Sheep	600	1,000	1,000	0	0	25	0	0	25	0	0	100
Swine (Market)	1,000	2,000	2,000	*Feeding practices: for example, more concentrates, adding certain oils or oilseeds to the diet, improving pasture quality.								
Swine (Breeding)	500	700	700	*Specific agents: specific agents and dietary additives to reduce CH_4 emissions (Ionophores, vaccines, etc.)								
Poultry	9,000	60,000	60,000	*Breeding: increasing productivity through breeding and better								

Livestock Categories	Head Number (mean per year)			Technical Mitigation Option (%)
Goats	900	2,000	2,000	management practices (reduction in the number of replacement heifers)

9. **Land use change.** The Project contemplates the reforestation and restoration of 500 ha of forests and watersheds affected by Hurricane Maria (which were subject to degradation). It will also facilitate the installment of 100 ha of live fences and plantations surrounding grasslands, ranges, and paddocks to improve land management (reduce degradation in former grasslands, ranges, and paddocks) and enhance livestock nutrition.

Table 4.3. Evolutions of Land Use/category (hectares)

System		Initial State	Without Project	With Project
Forest/Plantation		0.00	0.00	600.00
Agriculture	Annual	1,335.23	1,335.23	1,335.23
	Perennial	1,133.35	1,133.35	1,133.35
	Rice	0.00	0.00	0.00
Grassland		1,600.00	1,600.00	1,500.00
Other lands	Degraded	500.00	500.00	0.00
	Other	0.00	0.00	0.00
Wetlands		0.00	0.00	0.00
Total area (ha)		4,568.58	4,568.58	4,568.58

10. **Inputs.** The main inputs considered in this GHG analysis are agricultural inputs, such as fertilizers and pesticides. Other inputs are energy consumption and productive infrastructure.

11. **Agricultural inputs.** The technological packages supported by the Project for crop production include the use of improved seeds, fertilizers, and pest control management. The amounts (tons per year) of fertilizers (other N-fertilizers, phosphorus, and potassium); herbicides; insecticides; and fungicides were calculated based on data from the Minister of Agriculture. Data was provided per acre for a number of annual and perennial crops. The average amounts of inputs (in tons per year) for groups of crops were multiplied by the projected area for every group (tubers, roots and vegetables, and perennials). It was deemed that the amount of fertilizers and pesticides applied per year was too high, given the total area covered by the Project. Some assumptions were applied. Even if the Project provides incentives for a higher number of small and medium farmers using fertilizers and pesticides (grants covering a certain share of inputs costs), compared to the baseline and the without-project situation, it also provides technical support to make a more efficient use of inputs and apply alternative methods to reduce the need for agrochemicals (20 percent reduction). As mentioned earlier, there are many highly effective and applicable practices in the frame of the climate-smart approach.

12. **Energy consumption.** Energy consumption in the with-project situation shows reductions compared to the with-project situation. It corresponds to savings from activities envisaged under Subcomponent A.2. This is a projected reduction in the number, length, and/or energy intensity of fishing trips due to investments in more efficient fishery systems.

13. **Productive infrastructure.** The Project will finance the rehabilitation and improvement of government and productive infrastructure under Subcomponent B1. It includes, among others, government office buildings; propagation centers (agriculture, forestry, and livestock); training facilities; eco-trails; and irrigation infrastructure.

Results

14. **Net carbon balance.** A GHG emissions balance was estimated for the Climate Resilience and Agricultural Livelihoods Project using EX-ACT, which quantifies the net carbon balance with regard to tCO_2e, resulting from GHGs emitted or sequestered as a result of the Project compared to the without-project scenario. The Project leads to estimated annual climate change mitigation benefits of 9,633 tCO_2e, when compared to a business-as-usual baseline scenario. This is equivalent to annually reduced GHG emissions per hectare of 2.1 tCO_2e. After 20 years (a period commonly used for project GHG accounting in agriculture), GHG mitigation benefits amounting to a reduction of 192,658 tCO_2e will be generated. In addition to the achievement of the directly targeted PDOs, the Project also provides intermediate GHG emission reductions as a co-benefit of the project implementation.

15. **Carbon sources and sinks.** The main carbon source, as expected, comes from livestock inputs. The sequestration benefits come principally from afforestation of degraded areas, followed by the improved management of livestock and crop systems.

Table 4.4. Results of the Ex ante GHG Analysis in tCO_2e

Components of the Project	Gross Fluxes			Share Per GHG of the Balance					Results Per Year		
	Without	With	Balance	All GHG in tCO_2e					Without	With	Balance
	All GHG in tCO_2e			CO_2			N_2O	CH_4			
	Positive = source/ negative = sink			Biomass	Soil	Other					
Land use changes											
Deforestation	0	0	0	0	0		0	0	0	0	0
Afforestation	0	–427,620	–427,620	–283,905	–143,715		0	0	0	–21,381	–21,381
Other Land Use Changes	0	0	0	0	0		0	0	0	0	0
Agriculture											
Annual	–14,688	–51,901	–37,213	0	–40,885		3,672	0	–734	–2,595	–1,861
Perennial	–15,867	–16,755	–889	0	–889		0	0	–793	–838	–44
Grassland and Livestock											
Grassland	179,703	–211,001	–390,705	0	–390,705		0	0	8,985	–10,550	–19,535
Livestock	78,238	711,147	632,909				633,629	–720	3,912	35,557	31,645
Inputs and Investments	257,400	288,259	30,859			26,103	4,756	0	12,870	14,413	1,543
Total	484,786	292,128	–	–283,905	–576,193	26,103	642,057	–720	24,239	14,606	-9,633

Components of the Project	Gross Fluxes			Share Per GHG of the Balance					Results Per Year		
			192,658								
Per hectare	106	64	–42	–56.4	–126.1	5.7	140.5	–0.2			
Per hectare per year	5.3	3.2	–2.1	–2.8	–6.3	0.3	7.0	0.0	5.3	3.2	-2.1

16. **Sensitivity analysis**. The uncertainty, as calculated by the EX-ACT tool, is 39 percent. This analysis was run using mostly tier 1 coefficients, which in some cases may provide over or underestimated values. There are no specific coefficients for Dominica; therefore, it is a relevant source of uncertainty in the estimation of GHG emission/sequestration scenarios for the Project.

ANNEX 5: ECONOMIC AND FINANCIAL ANALYSIS

COUNTRY: Dominica
Emergency Agricultural Livelihoods and Climate Resilience Project

Project's Expected Development Impact

1. The PDO is to contribute to restoring agricultural livelihoods and enhancing climate resilience of farmers and fisherfolk affected by Hurricane Maria in Dominica.

2. The direct project beneficiaries are farmers, rural producer organizations, and agribusiness entrepreneurs, fishers, and other economic actors related to the agricultural (crops and livestock), fisheries and forestry sector. An estimated 4,900 farmers and fisherfolk are expected to benefit directly from the Project. They will benefit from rehabilitation and reconstruction of agriculture, fisheries, and forestry infrastructures, and adoption and dissemination of advanced technologies on modern agriculture and post-production techniques and practices. Technical and managerial staff of MAF and other participating organizations will also benefit from the Project through training and capacity-building activities.

3. In the short term, the Project will support the recapitalization of small-scale farmers so that they can reignite production for own-family consumption and fore income generation by sales in local markets. Medium-term support would promote a climate-resilient competitive agriculture system through sustainable intensification, diversification, and improved access to markets. Sustainable intensification will be achieved through adoption of higher yielding, climate-adapted varieties/breeds, natural resource conservation technologies and practices, integrated pest management, and enhanced post-production processes, among others. Diversification into higher-value crops would be achieved through promotion of modern technologies and agribusiness-related training. Co-financing by the Project will facilitate adoption of good production and post-production practices and allow beneficiaries to make the required investments to achieve projected goals.

4. Furthermore, institutional strengthening and capacity building initiatives to promote resilience, competitiveness, improved livelihood, and sustainability of agriculture sector would be key elements of the Project. This type of interventions would strengthen public service provision to complement the actions of small- and medium-scale farmers and fishers and other productive actors. The Project will pay attention to the inclusion of women and youth in the subprojects by including procedures or incentives, drawing upon good practices of Community Driven Development projects in other countries. For instance, the Project could allocate separate grants for subprojects identified, prepared, and led by women.

Rationale for Public Sector Involvement

5. Public action is justified when market failures underpin low levels of land and labor productivity, and limited value added to primary production. This is the case in Dominica where under provision of effective rural support services and financing and integration of small- and medium-scale farmers and fishers to dynamic markets is hampered by weak organizational and business development capacities, information asymmetries, and diseconomies of scale. Public sector services and capital transfers (cash or in-kind) to private actors to promote the reactivation of the agricultural sector in a post-Hurricane Maria context are

justified by the need to ensure sufficient supplies of good quality food in the market place. In the medium term, the promotion of better production and post-production practices and technologies for increased productivity, climate resilience, and product quality in accordance to market standards, as well as the co-financing of private ventures of organized small-scale producers, are justified based on mitigating market failures.

World Bank's Added Value

6. The World Bank is in a unique position to provide best practice guidance on relevant issues such as effective disaster recovery, agricultural sector development and capacity strengthening for producer organizations, increased incomes and poverty reduction through business development and market integration, and so on. Particularly relevant to this operation are the World Bank´s recent experiences in resilient post-disaster recovery worldwide. The World Bank will provide technical and strategic knowledge transfer through the participation of specialists along project implementation and during evaluation, including in M&E, project FM and procurement, among others.

Economic Analysis

Table 5.1. Summary Table of Economic Analysis Results

Description	LCP	HCP
Discounted benefits	US$26.8 million	US$30.3 million
Discounted costs	US$19.0 million	US$19.0 million
NPV	US$7.8 million	US$11.3 million
ERR (%)	24	28

7. To measure the economic worth of the Project from the perspective of society, a standard ex ante economic CBA was performed. The analysis was carried out for a 15-year period, including a 4-year period of project implementation. It assumes 2018 constant prices and a 10 percent discount rate. The Eastern Caribbean dollar was used as the unit of account, and the official exchange rate of EC$2.7 to US$1 was applied when converting into U.S. dollars.

8. According to recent World Bank guidance,[26] to internalize the economic net costs or net benefits of the project's impact on GHG emissions, the CBA economic feasibility indicators were estimated using an LCP assumption and a HCP assumption. As shown in table 5.1, under the LCP scenario, the ERR for the entire project was 24 percent and the NPV was approximately US$7.8 million. Under the HCP scenario, the ERR was 28 percent and the NPV was approximately US$11.3 million.

9. The robustness of these results to changes in the base scenario was tested and confirmed through a sensitivity analysis. Switching values with respect to cost increases and reductions of economic benefits were estimated using both LCP and HCP assumptions. The results are shown in table 5.2. The switching values represent the maximum cost increase or maximum reduction in benefits that the Project could withstand and remain economically feasible. In addition, when not accounting for the economic benefits generated by the net reduction in GHG emissions, the ERR was estimated at 19 percent and the NPV at

[26] Guidance note on shadow price of carbon in economic analysis. World Bank, September 2017.

around US$4.3 million. Based on these results, it can be concluded that the Project represents a sound investment opportunity from the perspective of Dominica's society, even when subjected to the level of variability of costs and benefits established within the parameters of the switching values presented in table 5.2.

Table 5.2. Sensitivity Analysis Results

Switching Values	LCP (%)	HCP (%)
Maximum increase in cost	29	37
Maximum reduction in benefits	41	60

Project Costs

10. The stream of costs considered in the project's CBA comprises implementation costs for all components from all sources, including the World Bank with US$21.2 million, the GoCD with US$2.86 million, and project beneficiaries with US$1.57 million, for a total of US$25.65 million, over the five-year implementation period. These project costs are net of taxes and price contingencies.

Project Economic Benefits

11. The economic benefits accounted for in the CBA come mainly from Subcomponents A.1 'Restoration of Cropping Systems' and A.2: 'Restoration of Livestock and Fisheries Systems'. They come largely in the form of incremental net revenue to direct beneficiaries from project-supported activities in the agricultural, fisheries, and forestry sector. These activities would include improved crop production (annual and perennial crops); livestock production (small ruminants, pigs, poultry, and so on); fishing and related activities; and boatbuilding. In the forestry sector, included economic benefits come from endeavors such as production of seedlings for reforestation, salvaging of fallen wood, and the rehabilitation of tourist trails. These economic benefits were quantified based on (a) crop, livestock, and fishery and forestry budgets prepared for the abovementioned activities and (b) the expected areas under cultivation as well as the assumed coverage of the livestock and fishery activities. In addition, the with-project scenario assumes increased productivity in the case of annual crops and livestock production (see Table 5.4in the Financial Analysis section). The improved productivity would be the direct result of enhanced production and post-production practices that will be promoted through the project's technical assistance and supported by the provision of beneficiary contributions or project support for essential inputs, materials, and technical assistance and so on.

Table 5.3. Expected Physical Progress of Main Productive Activities

Year	1	2	3	4	5	6	7	8–10
Annual Crops (Hectares)								
Without project	1,336	709						
With project	2,045							
Perennial Crops (Hectares)								
Without project	236	236	236	236				
With project	315	315	315					
Broilers (birds)								
Without project	2,550	2,550	2,550	2,550	2,550			
With project	7,500	6,000	1,500					

Year	1	2	3	4	5	6	7	8–10
Layers (hens)								
Without project	2,550	2,550	2,550	2,550	2,550			
With project	7,500	6,000	1,500					
Small Ruminants (ewes/does)								
Without project	100	100	100	100	100	100	100	300
With Project	500	300	200					
Pigs (sows)								
Without project	400	400	400	400	400			
With project	1,000	600	400					
Active fishing boats (units)								
Without project	30	30	30	30	30			
With project	50	50	50					
Boats built (units)								
Without project	6	6	6	6	6	6	6	18
With project	30	30	30					

12. Economic enterprise budgets were derived from the financial budgets by including the imputed (opportunity) cost of family labor and excluding taxes from the cost of and inputs and outputs. Prices used were current (January 2018) prices. As no major market distortions of a magnitude that would appear to significantly alter the economic feasibility indicators were identified, a conversion factor of 1.0 was applied to all commodities and inputs, suggesting that financial prices fully reflect their corresponding economic values.

13. Estimated economic net revenues per acre, or other production units, were subsequently multiplied by the number of acres or units projected over time to determine total economic benefits for the both the with-project and the counterfactual scenarios. It was assumed that all productive activities would reach the same number of acres or units under both scenarios, with the main difference that the counterfactual assumes a slower rate of recovery. Table 5.3 presents the assumptions used with respect to the rate of physical progress of both the with-project and the without-project scenarios. The arithmetic differences between the net benefits of both scenarios was then estimated to determine the incremental economic impact of project investments. The stream of aggregate net incremental benefits and total project costs were used to assess the economic feasibility of the whole project. The prices used to estimate the incremental economic benefits of the considered productive activities were net of taxes. No other adjustments were made, as no major market distortions appeared to exist that would significantly change the estimated economic performance indicators.

14. The Project will also contribute to climate change mitigation through an estimated net reduction in GHG emissions of approximately 185,101 tCO_2e over 20 years. This net reduction of GHG was proportionally adjusted to a 15-year period to internalize the benefit in the CBA. These estimations are explained in detail in annex 4. To price this benefit and following recent World Bank guidance, as previously stated, LCP and HCP assumptions were used. The LCP assumption for year 2018 was US$38 per ton of CO_2 e, while the HCP assumption was US$77. It was further assumed, according to the guidance note, that both shadow prices would grow by 2.25 percent annually until the end of the period of

analysis.[27]

15. Other economic benefits, although indirect and not accounted for in the CBA, would accrue to input retailers, traders, and processors, as the increased production would likely imply an increase the in demand for inputs and services with respect to the counterfactual scenario. Increased demand for goods and services would be expected to generate additional income and have positive employment effects, and eventually increase government tax revenues. In addition, possible reduced imports could result in foreign exchange savings, and consumers would be expected to benefit from a more affordable, stable, and higher-quality food supply.

Financial Analysis

16. A financial CBA for the entire project would not be relevant, as project design does not contemplate that the financial revenues generated by the investment ought to cover the corresponding financial costs. However, it is pertinent to assess the sustainability of promoted productive activities from a financial perspective, for financial sustainability purposes. Thus, a financial CBA was performed for sample of productive activities to be promoted by the Project, under a series of simplifying general assumptions. Among these, conservative market prices were used for production outputs, as well as conservative assumed productivity increments with respect to the before-project situation. The financial CBA of productive activities was done with a 15-year period of analysis, just as the economic CBA and with a 10 percent discount rate representing the opportunity cost of capital.

17. All crops, livestock rearing, and fishing and forestry related activities subjected to a financial CBA proved financially feasible (see table 5.4). This would indicate that project beneficiaries would have sufficient financial incentives to engage in project-supported activities and adopt the improved practices and technologies to be promoted. During project implementation, however, each productive alliance to be considered for financing by the project must go through an ex ante financial CBA, in addition to meeting other feasibility and sustainability criteria.

Table 5.4. Summary of Representative Financial Results

Activity	Productivity without Project (kg/ha)*	Productivity with Project (kg/ha) *	NPV [a] (US$/ha) *
Plantain	21,220	22,705	72,176
Dasheen	13,473	14,416	31,320
Tannia	15,157	16,218	172,157
Yam	17,515	18,741	124,802
Citrus	16,280	16,280	63,397
Cocoa	5,052	5,052	123,626
Coffee	3,649	3,649	131,930
Coconut	6,175	6,175	8,153
Avocado	8,420	8,420	3,937
Broilers (kg/bird)	2.48	5.57	US$1,939/thousand birds
Layers (dozen eggs/hen/year)	14.9	15.7	US$5,029 /thousand hens

[27] Guidance note on shadow price of carbon in economic analysis. World Bank. September 2017.

Activity	Productivity without Project (kg/ha)*	Productivity with Project (kg/ha) *	NPV [a] (US$/ha) *
Small Ruminants (kg/head)	41.0	43.2	US$49,360/unit of 20 ewes
Pigs (kg of meat/head)	63.2	66.4	US$31,896/unit of 20 sows
Fishing (kg of fish/boat/year)	—	4,956	US$172,667/boat
Boatbuilding (boats/shop)	—	30	US$133,310/shop

Note: *Unless otherwise specified. a. Over 15 years with a 10 percent discount rate.

Other Issues

18. Key risks to the project identified in the Project Appraisal Document were reviewed to assess if they may introduce uncertainty to the results of the economic analysis. Upon review, it was concluded that the identified risks were not significant to the results of the EFA, and thus an adjustment to the general methodology was not warranted beyond the use of conservative assumptions with respect to economic prices and the application of the sensitivity analysis with respect to increases in costs or decreases in revenue.

ANNEX 6: SAFEGUARDS ACTION PLAN

COUNTRY: Dominica
Emergency Agricultural Livelihoods and Climate Resilience Project

I. Introduction

1. The Dominica Emergency Agricultural Livelihoods and Climate Resilience Project is being prepared and implemented according to paragraph 12 of the Bank Policy on Investment Project Financing, which allows for certain exceptions to the IPF policy requirements, including deferral of safeguards requirements, if the World Bank deems the Borrower to be in urgent need of assistance because of a disaster or conflict. Dominica was affected by Hurricane Maria, a Category 5 storm (Saffir-Simpson scale), with winds exceeding 200 km per hour. As the storm passed over the center of the island, Dominica was exposed to extraordinary winds for more than three hours, accompanied by intense rainfall, which provoked flashfloods and landslides. The fisheries sector was also heavily affected. According to the PDNA estimates, 370 vessels were damaged or destroyed. Similarly, much of the fishing gears and many engines were either lost or damaged. Hurricane Maria defoliated almost all trees and uprooted an estimated 10–20 percent. The entire infrastructure of the Forestry Department was also severely damaged, including forestry and national parks buildings, nurseries and the trail infrastructure, which is a major component of the tourism industry.

2. The exception allowing for deferral of environmental and social requirements was granted for the Project and the World Bank has prepared, in accordance with its policies, the SAP, a project-level safeguards planning document that provides a time-bound plan setting forth the steps and the sequential planning and coordination for project activities and the preparation by the GoCD of the relevant safeguards instruments to ensure compliance with the safeguards requirements. The Social Action Plan is guided by the dual objective of ensuring that there is a road map for safeguards compliance during project implementation and providing clear guidance to MAF on the types of actions and instruments required to facilitate speedy implementation of emergency services.

II. Project Description

3. The PDO is to contribute to restoring agricultural livelihoods and enhancing climate resilience of farmers and fisherfolk affected by Hurricane Maria in Dominica.

Component A: Restoration of Productive Base for Recovery of Agricultural Livelihoods.

4. Under this component, the Project aims to provide immediate action for (a) helping small-, medium-size, and commercially oriented crop and livestock farmers in restoring their basic productive capacity and recovery of their livelihoods; (b) assisting fisherfolk in restoring the fishing capacity by providing specific investment and technical assistance support, as well as assisting in the recovery of boat-building facilities; and (c) providing technical assistance for the development of more productive, climate-resilient systems and the promotion of agribusiness capabilities.

Subcomponent A.1: Restoration of Cropping Systems

5. This subcomponent will provide support in recovery of the production capacity of small- and medium-size crop farmers as well as commercially oriented farmers integrated in value chains and helping in the gradual restoration of their livelihoods and in retaining their market shares, through provision of (a) an essential package of inputs (improved quality seeds and fertilizers), tools, and materials for the replanting or restoration of crops and (b) technical and advisory services and training to support adoption of technology and use of climate-smart practices for increasing diversification and climate resilience at the landscape level. The subcomponent will primarily focus on different support intervention lines to cover the direct assistance to the main types of beneficiaries (a) small- and medium-size crop farmers (most of them currently growing annual crops) and (b) medium size commercial farmers (mostly producing high-value perennial/tree crops already inserted in value chains).

6. In addition to the provision of support (key inputs), the beneficiaries will receive technical assistance through MAF's extension services (to be strengthened on parallel by the Project through training, institutional strengthening and increased mobility), as well as training through participation in FFSs, demonstration/dissemination events of technical practices and technologies in field days, and other extension/technology dissemination activities organized by MAF under the Project. This training and technical assistance will be focused on the adoption of new and effective technologies and modern inputs to gradually increase climate-resilient in the agricultural sector.

7. The overall intervention will reach around 4,600 farmers and will enable the restoration of about 2,470 ha (6,100 acres) of cropping area in the following cropping seasons. These beneficiaries will be selected by the PIU/MAF based on transparent criteria to be made public and detailed in the POM and with transparent sharing of information pertaining to the outcome of the selection process (see annex 1). Under this subcomponent, the Project will finance procurement of key inputs such as seeds/seedlings, fertilizers, tools, and other materials in accordance to the technical recommendations by MAF, and as agreed between the beneficiary and the extension agent (annex 1), as well as technical advisory services and training. The Project will also finance incremental operational expenses for MAF, needed for the storage and distribution of inputs, as well as mobility expenses for MAF's field extension agents involved in these activities.

Subcomponent A.2: Restoration of Livestock and Fisheries Systems

8. This component aims to help in restoring production capacity and livelihoods of livestock farmers and fisherfolk, enhancing climate resilience and efficiency of production systems, and promoting agribusiness capabilities. Under this subcomponent, the Project will finance procurement of inputs and materials needed by the livestock farmers and the fisherfolk and boatbuilders, any necessary consultant and technical advisory services and beneficiaries training, as well as incremental operational expenses for MAF's for field extension agents assisting these beneficiaries and for the distribution of inputs.

9. **Support to medium-scale commercial livestock farmers.** The livestock interventions under this subcomponent aim to reestablish the livestock production base that was severely damaged by Hurricane Maria and build a more sustainable and climate-resilient sector. The support scheme will support about 200 livestock producers (where an estimated 20 percent will be women). The Project will assist these producers through investment support to restore the damaged animal shelter/housing and other infrastructures for production of poultry (layers and broilers), goats, sheep, rabbits, and pigs, and for

beekeeping. A set of simple mechanisms will be put in place to ensure that the beneficiaries follow climate-resilient specifications and effectively co-finance the activities approved in the investment plans. (see annex 1 and further details to be incorporated into the POM).

10. **Support to fisherfolk.** The fishery subsector interventions are aimed at restoring fish supply and contributing to livelihoods restoration and revenue streams in the local economy. The Project will support about 150 individual eligible fishers already members of the local seafood value chain operating within voluntary guidelines. Specific interventions to be supported by the Project include (a) repairing/construction of about 150 boats for fisherfolk (up to 50 percent of the total cost of the boat subject to a maximum of US$5,500 per beneficiary) and (b) reconstructing/rehabilitating about five boat-building facilities (up to a maximum of US$5,500 per beneficiary).

Subcomponent A.3: Building of Climate Resilience and Agribusiness Capabilities

11. **Climate resilience.** To adequately support the investments at the farm level under Subcomponent A.1, the Project will provide technical assistance for development of more productive and climate-resilient systems, through recruitment of international experts to prepare development strategies specifically needed in Dominica's context (based on the current situation, vulnerability conditions, relative competitiveness constraints, and development strategy) for key agricultural products (either presently being grown or to be introduced) that will inform investment directions with regard to changing weather patterns, natural disasters and market opportunities, as well as providing long-term development directions for each crop industry. These experts will also train extension agents, rural workers, and farmers in crop production; introduction of new crops varieties; and other topics such as climate-smart agricultural practices, water management and harvesting, marketing, business management, and improved postharvest handling techniques. Therefore, the subcomponent will finance consulting services (firms and/or individuals), non-consulting services including advisory and training services, and capacity-building inputs and events.

12. **Agribusiness.** This subcomponent will also contribute to building agribusiness capabilities among small- to medium-size crop and livestock farmers and fisherfolk who would have benefited under Subcomponents A.1 and A.2. Customized training under the subcomponent will target small farmers and fisherfolk who are members of cooperatives or formal APOs. Channeling the specialized training through cooperatives and APOs is essential to maximize results, including GHG mitigation outcomes from climate-smart design elements. These legally recognized organizations have the potential to act as aggregators to (a) serve as a formal channel to marketing and add value to produce from small-scale farmers and fisherfolk; (b) deliver technical assistance to small-scale farmers, including GHG mitigation outcomes from climate-smart design elements; and (c) serve as the country's platform to boost its agricultural regional and international market share. The subcomponent will also train MAF's public extension agents in climate-smart agricultural practices and will undertake market and value chain studies required to support the country's medium-term agribusiness development strategy.

Component B: Restoration of Key Productive Infrastructure and Institutional Strengthening

Subcomponent B.1: Restoration of Key Infrastructure in Agriculture, Livestock, and Forestry

13. This subcomponent will help in restoring key public sector's infrastructure and assets damaged by the hurricane and reestablish the essential public services for up to 4,800 crop and livestock farmers. The

key areas where reconstruction or rehabilitation of public infrastructure is needed include: (a) five crop propagation centers (including forestry), (b) a CLF, (c) MAF regional offices and training centers, (d) Forestry Division's sylvicultural centers and facilities, (e) building reconstruction and rehabilitation of eco-trails, and (e) rehabilitation of a community irrigation system. The rebuilding initiatives will be undertaken with more resilient construction code and the public infrastructure will be restored in line with improved standards of safety to reduce the impact of future climate and weather risks. Therefore, this subcomponent will finance (a) consulting services for engineering design and supervision of works, (b) civil works, (c) equipment, including construction equipment, office and communication, electronic equipment, vehicles and water storage tanks and water distribution; (d) other goods needed for the restoration of eco-trails; and (e) incremental operating costs for the installation of equipment and for the restoration of services by the relevant division of MAF.

Subcomponent B.2: Institutional Strengthening and Capacity Building of MAF

14. The Project will provide capacity-building assistance to MAF in the core areas of (a) managing projects (project M&E, procurement, FM, social and environmental safeguards, and agribusiness); (b) conducting analytical studies to support the revision of policies and regulatory frameworks (risk transfer mechanisms, national certification systems, agricultural information systems and revision of the Fisheries Act); (c) building capacity for carrying out agricultural census/survey; assessment of MAF's readiness for conducting such a census/survey; (d) conducting several analytical studies on key areas to support ongoing efforts to strengthen the institutional structure of MAF; (e) contributing to developing of an e-agriculture strategy for the agriculture, fisheries, and forestry sectors; (f) contributing to developing an integrated MIS for agriculture sector; and (g) supporting the efforts to develop a fisheries community insurance model (building resilience and reducing the potential risks). Items to be procured by the Project include specialized consulting services (individual and firms), non-consulting services including advisory and training services, training events, related inputs, and incremental operating costs.

Component C: Project Management and Coordination

15. This component will support the establishment of the PIU within MAF, to serve as the unit responsible for the overall implementation and coordination of the project activities, as well as the setting up of the IST to be established within MoF (see annexes 1 and 2 for detailed implementation arrangements). The overall implementation responsibilities of the Project will rest with the PIU within MAF. The overall safeguards advisory and fiduciary (procurement and FM) responsibilities of the Project will rest within the PIU, which will benefit from close, hands-on procurement support from the shared services of the IST, in support of post-Maria recovery efforts.

16. The Project will finance (a) incremental dedicated staff for the establishment and operations of the IST (to be shared with other projects, in proportions to be determined) and for the PIU; (b) goods and services for setting up the offices and for establishing an M&E system; (c) contracting international technical experts (firms and individuals)/consultants in critical project management areas; (d) preparation of environmental and social safeguards studies and instruments including development of a GRMs; (e) non-consulting services, for example, verification services, advisory, capacity building and training inputs and events; (f) incremental operating costs; and (g) impact evaluation and technical and financial audits.

Component D: Contingency Emergency Response-CER

17. This component will finance eligible expenditures under the CER to provide immediate response to an eligible crisis or emergency as needed in Dominica. This contingency facility can be triggered through the formal declaration of an emergency by the government authority and upon a formal request from the GoCD to the World Bank through MoF. In such cases, funds from an unallocated category or other project components will be reallocated to finance emergency response expenditures to meet an eligible crisis or emergency, as needed. The CER would include mitigation, recovery, and reconstruction following natural disasters such as severe droughts, floods, disease outbreaks, and landslides, among others.

III. Project Locations and Some Salient Social and Environmental Characteristics

18. The project activities will be carried out in all ten parishes of Dominica. The island's mountainous, rugged landscape creates significant engineering challenges to reducing infrastructure vulnerability to natural disasters and climate change. Dominica has a population of approximately 72,000 people and a land area of approximately 750 km^2. About 60 percent of the land is classified as a World Heritage site by United Nations Educational, Scientific, and Cultural Organization, due to its rich biodiversity. It is located near the center of a string of islands known as the Lesser Antilles, between the neighboring French territories of Martinique and Guadeloupe. The capital Roseau is located to the southwest of the island and has a population of around 15,000 people.

19. The agriculture and fisheries sectors were among the most affected sectors and suffered high damages and losses, severely affecting the livelihoods of the predominantly small-scale farming community. Table 6.1 indicates the summary of damages, losses, and needs of the crop, livestock, fisheries,[28] and forestry subsectors. An estimated 80–100 percent of root crops, vegetables, bananas, and plantains and 90 percent of tree crops were damaged. Livestock losses are estimated to be 45 percent of cattle, 50 percent of small ruminants, 65 percent of pigs, and 90 percent of chicken stocks.

Table 6.1. Damages, Losses, and Needs

Productive Sector	Damages and Losses (US$, millions)	Needs (US$, millions)
Crops and livestock	179.6	88.5
Fisheries	5.3	2.5
Forestry	29.7	14.9
Total	**214.6**	**105.9**

Source: PDNA.

20. The fisheries sector was also heavily affected. According to the PDNA estimates, 370 vessels were damaged or destroyed. Similarly, much of the fishing gears and many engines were either lost or damaged.

21. Hurricane Maria defoliated almost all trees and uprooted an estimated 10–20 percent. The entire infrastructure of the Forestry Department was also severely damaged, including forestry and national parks buildings, nurseries, trail infrastructure, and so on. Much of this infrastructure supports public use of protected areas and is a major component of the tourism industry.

[28] The agriculture sector comprises crop, livestock, and fisheries subsectors.

Possible Social and Environmental Impacts and Risks

Table 6.2. Proposed Investments by Sector, Potential Impacts, and Mitigation Measures

Sector	Types of Investments Proposed	Potential Socioenvironmental Impacts	Proposed Mitigation Measures
Agriculture	Small to medium-scale Civil works/construction of buildings	• Land clearing/expansion • Land acquisition and or Involuntary resettlement • Impact on tenant crops • Typical environmental impacts of small civil works (dust, noise, traffic disturbance) • Worker's health and safety	• Screening checklist to ensure no economic displacement • ARAPs if necessary for compensation of • Adequate Environmental and Social Management plans (ESMPs) commensurate to the level of risks
	Distribution of seeds, planting materials, fertilizers, and pesticides	• Potential/deserving beneficiaries left out	• Wide and early information and communication campaign with clear selection processes, criteria, and accessibility in applying • Known and accessible GCHM • Follow World Bank EHS guidelines
Livestock	Construction of buildings, husbandry structures, feedstock production equipment, tools	• Typical environmental impacts of small civil works (dust, noise, traffic disturbance) • Land acquisition and or Involuntary resettlement	• Screening checklist to ensure no economic displacement • Preparation of ARAPs • Adequate ESMPs commensurate to the level of risks • Follow World Bank EHS guidelines
Forestry	Repair/rebuilding of trails	• May transition through private land • Minor civil works impacts (trails are supposed to remain as natural as possible) • Impacts on natural habitat/forestry (clearing of new areas)	• Screening checklist to ensure follow procedure for access • Adequate ESMPs commensurate to the level of risks • Follow World Bank EHS guidelines
Fisheries	Civil works/reconstruction of workshops boats and engines Fishing gear, equipment	• Typical environmental impacts of small civil works (dust, noise, traffic disturbance) • Targeting/potential/deserving beneficiaries left out	• Information and communication strategy • ARAPs if required • Adequate ESMPs commensurate to the level of risks • Follow World Bank EHS guidelines

Environmental Impacts

- Impacts associated with the activities of construction and rehabilitation of small civil works

that are commonly known and could be (a) increased level of dust, noise, and vibration; (b) pollution risks related to removal and disposal of debris/demolition materials which could potentially lead to water/air pollution; (c) health and safety risks due to the construction/reconstruction activities.

- There are also positive impacts with the concept of 'build back better' and disaster risk reduction through the adoption of new and resilient engineering technologies for reconstructing infrastructure.

Social Impacts

- Positive benefits to beneficiaries, including poor, women, indigenous peoples[29]
- Potential loss of livelihood and damages to crops and trees
- Inadequate consultations with vulnerable groups, including indigenous peoples, women, and other marginalized groups, leading to their low participation in project activities
- Ineffective mechanisms for benefit targeting and information dissemination leading to exclusion of marginalized groups from project benefits

22. **OP 4.12 - Involuntary Resettlement is triggered for the Project.** Involuntary Resettlement (OP 4.12) is being triggered to address instances of economic displacement. Project investments could have unintended impacts that result in economic displacement; for example, the rehabilitation of farm structures sited in a different location on the same site for safety reasons could impact crops or tenant farmer's livelihoods or physical assets or due to farmers expanding acreage coverage on their own farms restricting livelihoods of farmer tenants. While these situations are expected to be very few, if at all, the ESMF will be prepared within 10 weeks after Project effectiveness. ESMP and ARAPs will be prepared prior to commencement of works.

23. **OP 4.10 - Indigenous Peoples.** This policy will be triggered as there are communities that meet the World Bank criteria for the Indigenous Peoples Policy. The Project will prepare an Indigenous Peoples Plan informed by a Rapid Social Assessment and a Stakeholder Engagement Plan to include specific consultations with the Kalinago Communities to ensure they are informed about the Project and its potential impacts and how they can participate, as it is demand-driven. Based on consultation feedback from the Kalinago community, the IPP will ensure that indigenous council leadership are involved in policy and decision-making discussions and beneficiary selection processes to avoid lack of representation. The project design is flexible to accommodate their preferences for crop and other livelihood packages. The IPP will be prepared latest 12 weeks after Project effectiveness.

24. **The Project, through its safeguards and other instruments, will pay specific attention to disadvantaged and vulnerable groups.** All the safeguards instruments will take into consideration the risks and impacts on disadvantaged or vulnerable individuals or groups who by virtue of, for example, their age, gender, ethnicity, physical, mental or other disability, social, civic or health status, gender,

[29] There are communities in the Kalinago Territory that meet the World Bank criteria of OP 4.10 - Indigenous Peoples.

economic status, or other factor may be more likely to be adversely affected or limited in being able to benefit from the Project.

25. Safeguards principles and objectives will be integrated into TA activities in the following ways:

(a) The Project will have access to the social safeguard specialist in the shared Implementation Support Technical Team in the Ministry of Finance, who will provide quality assurance and technical advice through the review of key documents, Terms of Reference and contracts.

(b) The PIU will have a dedicated safeguards specialist to ensure that relevant project and TA inputs and activities are reviewed and monitored for safeguard implications.

26. **Consultation and disclosure.** Safeguards must be prepared by the Government, cleared by the World Bank, and disclosed as early as possible and before the start of civil works. The ESMF will be prepared by MAF within three months of signing of the contract and before start of works. Site-specific safeguards instruments (ARAPs), if necessary, will be required for all investments financed under the Project, including those financed under retroactive financing should there be a need for economic displacement prior to the start of any construction.

27. **Consideration of alternatives.** No meaningful alternative consideration is anticipated through the current project approach as the infrastructure will be reconstructed or rebuilt in the same locations taking into consideration sound environmental practices and avoidance of landslide land prone areas.

IV. Safeguards Instruments, Mitigation Process, and Implementation Schedule

28. The activities supported under the Project cover reconstruction of key public infrastructure, as well as activities in the agriculture, fisheries, livestock, and forestry sectors to promote their recovery and restauration. An ESMF will be prepared to guide the identification of possible social and environmental issues; develop mechanisms to comply with relevant GoCD and World Bank's policy requirements; lay out the approach and procedures relevant during the planning and implementation to mitigate the potential environmental and social impacts of the proposed investments; and describe the institutional and implementation arrangements, the monitoring mechanisms, and the capacity-building needs for effective implementation of the ESMF.

29. **The ESMF will be prepared** and will consist of the following:

(a) A screening methodology for all types of proposed civil works to identify relevant environmental and social issues and risks as well as environmental enhancement opportunities for each activity and to determine relevant national requirements related to environmental, health, and safety management as well as the applicability of the World Bank's Operational Policies on Environmental Assessment (4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36), the Pest Management (OP/BP 4.09), Physical Cultural Resources (OP/BP 4.11), Indigenous Peoples (OP/BP 4.10), and Involuntary Resettlement (OP/BP 4.12). There is another set of project activities (not involving civil works), involving technical assistance activities to help recover and restore the agriculture, fisheries, livestock, and forestry sectors and systems as well as institutional strengthening activities that will result in the revision of policies and regulatory frameworks and enhancement of forestry

management plans among others. These activities should also be screened for their potential environmental and social implications, risk, and impacts and checked if they are subject to World Bank safeguard policies.

(b) Site specific ESMPs to be completed and customized for each subcomponent based on the results of site screening to specify the siting, design, demolition/land cleaning, and construction management requirements for the reconstruction of infrastructure and other physical activities.

(c) A template to prepare site specific ARAPs to be completed and implemented prior to reconstruction based on the results of site screening, to identify if there are negative impacts on livelihoods and if so, avoid them and/or mitigate them through compensation.

(d) Procedures, roles, and responsibilities for carrying out and approving site-screening templates and site-specific ESMPs ensuring that the siting, designs, plans, specifications, and implementation plans reflect the environmental screening outcomes and ESMP requirements and are compliant with applicable World Bank safeguard policies and meet relevant policies/acts, strategies/rules, and regulations of the GoCD.

(e) An IPP will be prepared to ensure that the Kalinago Territory communities are aware of how project investments are to be carried out in the Kalinago Territory and to ensure free, prior informed consent (FPIC) on any project-related activity in line with their existing land tenure system, their customs, choices and preferences. Consultations will be coordinated with those for other projects.

(f) A simple and accessible Grievance Redress Mechanism will be developed to receive and handle complaints relating to the civil works for anyone adversely affected by the Project, and delivery of Project benefits. The process will be reviewed to make it consistent with other Bank financed projects to ensure a common approach to intake, recording, feedback routes and resolution timelines. The government is instituting a shared IST in the Ministry of Finance with fiduciary specialists for procurement, financial management, safeguards, and Monitoring and Evaluation. The main role of the social safeguards specialist in the IST will be to ensure that the principles and procedures followed by the GRM is consistent across all projects. The GRM will be in place 12 weeks after Project effectiveness.

(g) There is another set of project activities (not involving civil works), involving technical assistance activities to help recover and restore the agriculture, fisheries, livestock and forestry sectors and systems as well as institutional strengthening activities that will result on the revision of policies and regulatory frameworks, enhancement of forestry management plans among others. These activities should also be screened for their potential environmental and social implications, risk and impacts and check if they are subject to Bank safeguard policies.

(h) For the CERC component, an indicative list of activities related to the likely emergencies will be included in the ESMF, evaluating the potential risks and mitigation measures associated with them.

30. The SAP will also incorporate an IPP which be prepared based on the review of recent documents and consultations[30] to inform an information and communication campaign to ensure that the Kalinago Territory communities are aware of how project investments are to be carried out in the Kalinago Territory and to ensure that FPIC on any project-related activity in line with their existing land tenure system, their customs, choices and preferences. Consultations will be coordinated with those for other projects.

31. **Retroactive financing.** Any works contract subject to retroactive financing will require an environmental and a social audit to identify if the activity seeking retroactive financing compliant with the World Bank environmental safeguards and/or if any significant social or environmental impacts were not adequately mitigated. The audit will use simple methods such as verification lists (checklists), site visits, interview, and review of reports.

32. **Budget.** The cost for the safeguards preparation and implementation process will be 1 percent of the cost of the construction component. This cost will be confirmed by the specific PIUs, who will prepare the detailed cost allocation for safeguard implementation that includes preparation of safeguard instruments, implementation of mitigation measures, and monitoring and supervision.

[30] An IPP was prepared in 2017 to support the OECS SME Partial Credit Guarantee Scheme designed and supported by the World Bank. An IPP was prepared and disclosed in March 2014 for the DVRP currently being implemented and supported by the World Bank.

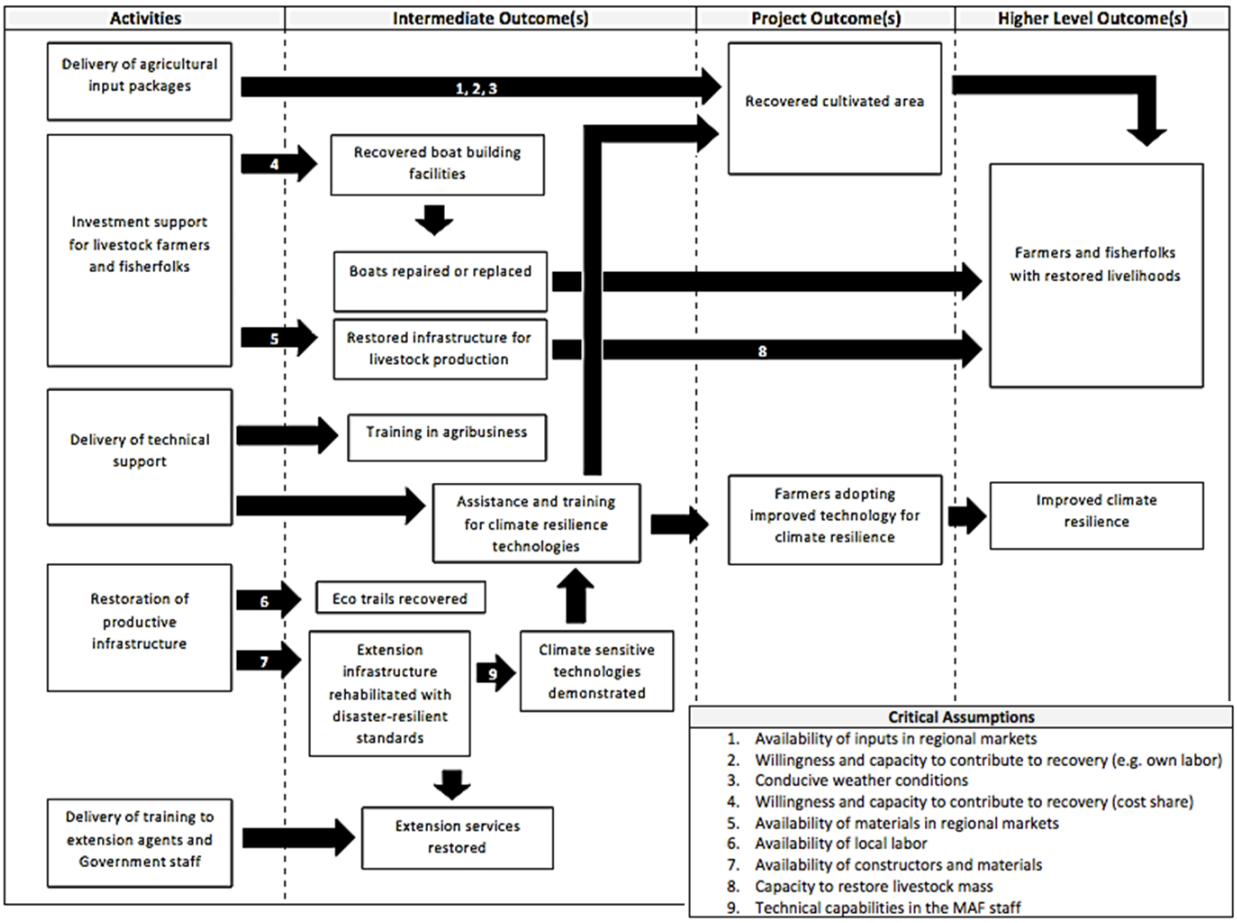
Table 6.3. Environmental and Social Action Plan

No.	Action	Responsibility	Due Date
ESMF			
1.	a) Preparation of the draft **ESMF**	MoF, MAF	10 weeks after Project effectiveness
	b) Disclosure of the draft ESMF on the Government web page of Agriculture and the World Bank's Info Shop	MAF	12 weeks after Project effectiveness
	c) Consultations on the draft ESMF	MAF	To be completed over a period of 2 weeks following public disclosure of the draft ESMF
	d) Preparation of the final ESMF (incorporating comments from the disclosure)	MAF	2 weeks after consultations have taken place
	e) Public disclosure of the final ESMF on the government webpage of agriculture and the World Bank's Info Shop	MAF	4 weeks after consultations have taken place
	f) Environmental and social awareness information to the beneficiaries	MAF	Need to be determined during project implementation
IPP			
2.	Prepare an IPP and undertake consultations and Rapid Social Assessment as part of the coordinated Information and Communication Campaign to include members of the Kalinago Territory	MAF	12 weeks after Project effectiveness
3.	Public disclosure of the draft IPP on the government webpage of Agriculture and the WB's Info Shop	MAF/World Bank	4 weeks after consultants have taken place
ARAPS when required			
4.	Preparation of ARAPs as needed.	MAF	ARAPs need to be finalized and compensation paid before start of civil works.
ESMP for retroactive financing			
5.	Any works contract subject to retroactive financing requires a finalized and published ESMP prior to the commencement of works. The ESMP should be sent to the World Bank for revision and should be disclosed in-country.	MAF	Prior to the commencement of works.

Complaint and GRM			
6.	Prepare a **GRM** • To be sent to the World Bank for review and approval • To be disclosed • To be incorporated in the POM	MAF	12 weeks after Project effectiveness

ANNEX 7: THEORY OF CHANGE FOR THE PROJECT

COUNTRY: Dominica
Emergency Agricultural Livelihoods and Climate Resilience Project



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ANNEX 8: MAP

COUNTRY: Dominica

Emergency Agricultural Livelihoods and Climate Resilience Project