The World Bank

FOR OFFICIAL USE ONLY

Report No: PAD1941

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
AND
INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A PROPOSED CREDIT

IN THE AMOUNT OF US$4.3 MILLION

(SDR 3.2 MILLION EQUIVALENT)

TO

SAINT VINCENT AND THE GRENADINES

AND

A PROPOSED CREDIT

IN THE AMOUNT OF US$2.2 MILLION

(SDR 1.7 MILLION EQUIVALENT)

AND

A PROPOSED LOAN

IN THE AMOUNT OF US$1.8 MILLION

TO

GRENADA

FOR A

OECS REGIONAL AGRICULTURAL COMPETITIVENESS PROJECT

May 4, 2017

AGRICULTURE GLOBAL PRACTICE
LATIN AMERICA AND THE CARIBBEAN REGION

CURRENCY EQUIVALENTS

(Exchange Rate Effective April 19, 2017)

Currency Unit	=	EC$
US$0.37	=	EC$1
US$1	=	EC$2.7

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Jorge Familiar
Country Director:	Tahseen Sayed
Senior Global Practice Director:	Juergen Voegele
Practice Manager:	Preeti S. Ahuja
Task Team Leader:	Eli Weiss

ABBREVIATIONS AND ACRONYMS

AA	Aggregators and Agro-processors
ASA	Advisory Services and Analytics
ATTA	Adventure Travel Trade Association
BP	Business Plans
CGF	Caribbean Growth Forum
CIIP	Competitive Industries and Innovation Program
DA	Designated Account
DFID	Department for International Development
ECEF	Eastern Caribbean Enterprise Fund
ECGS	Export Credit Guarantee Scheme
EA	Environmental Assessments
EMF	Environmental Management Framework
ERR	Economic Rate of Return
ESMF	Environmental and Social Management Framework
FF	Farmers and fishers
FM	Financial management
FMS	Financial Management Specialist
FRR	Financial Rate of Return
GCA	Grenada Cocoa Association
GCNA	Grenada Cooperative Nutmeg Association
GDP	Gross Domestic Product
GTA	Grenada Tourism Authority
GRS	Grievance Redress Service GRS
IDA	International Development Association
IFC	International Finance Corporation
IPF	Investment Project Financing
LAC	Latin America and the Caribbean
M&E	Monitoring and evaluation
MNIB	Marketing and National Importing Board
MoALFF	Ministry of Agriculture, Lands, Forestry and Fisheries – Grenada
MoAFFRT	Ministry of Agriculture, Forestry, Fisheries and Rural Transformation – St. Vincent and the Grenadines
MoFE	Ministry of Finance and Energy - Grenada
MoEP	Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour – St. Vincent and the Grenadines
MoU	Memorandum of Understanding
NGO	Non-governmental organization
NPV	Net Present Value
NTA	National Training Agency
ODTC	OECS Distribution and Transportation Company
OECS	Organisation of Eastern Caribbean States
PA	Productive Alliance
PCU	Project Coordination Unit
PDO	Project Development Objective

PIU	Project Implementing Unit
PO	Producers' Organization
POM	Project Operations Manual
PPD	Public Private Dialogue
PPSD	Project Procurement Strategy for Development
RPF	Resettlement Policy Framework
RPS	Regional Partnership Strategy
PSIPMU	Public Sector Investment Program Management Unit - St. Vincent and the Grenadines
SADC	Southern African Development Community
SME	Small and Medium Enterprise
SoP	Series of Projects
SVG	St. Vincent & the Grenadines
TA	Technical assistance
TVET	Vocational Education and Training
UK	United Kingdom
US	United States
WTTC	World Travel and Tourism Council

BASIC INFORMATION

Is this a regionally tagged project?	Country(ies)	Financing Instrument
Yes	Grenada, St. Vincent and the Grenadines	Investment Project Financing

[ ] Situations of Urgent Need of Assistance or Capacity Constraints

[ ] Financial Intermediaries

[ ] Series of Projects

Approval Date	Closing Date	Environmental Assessment Category
25-May-2017	31-May-2023	B - Partial Assessment

Bank/IFC Collaboration
No

Proposed Development Objective(s)

The proposed Project Development Objective (PDO) is to enhance access to markets and sales for competitively selected farmers and fishers, as well as their allied aggregators and agro-processors, in Grenada and St. Vincent and the Grenadines.

Components

Component Name	Cost (US$, millions)
Support for Preparation of Business Plans	0.78
Implementation of Business Plans	6.73
General Agricultural Services and Enabling Environment	0.79
Project Management, Monitoring and Evaluation	1.36

Organizations

Borrower :	St. Vincent & the Grenadines Grenada
Implementing Agency :	SVG - Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour Grenada - Ministry of Finance & Energy SVG - Ministry of Agriculture, Forestry, Fisheries and Rural Transformation Grenada - Ministry of Agriculture, Lands, Forestry and Fisheries.

Safeguards Deferral

Will the review of safeguards be deferred?

[ ] Yes [ ] No

PROJECT FINANCING DATA (IN USD MILLION)

[✓] Counterpart Funding	[✓] IBRD	[✓] IDA Credit [ ] Crisis Response Window [ ] Regional Projects Window	[ ] IDA Grant [ ] Crisis Response Window [ ] Regional Projects Window	[ ] Trust Funds	[ ] Parallel Financing

Total Project Cost: 9.66	Total Financing: 9.66 Of Which Bank Financing (IBRD/IDA): 8.30	Financing Gap: 0.00

Financing (in US$, millions)

Financing Source	Amount
International Bank for Reconstruction and Development	1.80
International Development Association (IDA)	6.50
LOCAL: BENEFICIARIES	1.36
Total	**9.66**

Expected Disbursements (in US$, millions)

Fiscal Year	2017	2018	2019	2020	2021	2022	2023
Annual	0.00	0.50	1.00	1.80	2.00	2.00	1.00
Cumulative	0.00	0.50	1.50	3.30	5.30	7.30	8.30

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture

Contributing Practice Areas

Trade & Competitiveness

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	Moderate
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	
10. Overall	Substantial

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

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
The Borrowers shall operate and maintain throughout Project implementation, a Project Coordination Unit with composition, resources, terms of reference and functions acceptable to the Bank in each one of the countries.

Sections and Description
Not later than 45 days after the Effective Date, the Borrowers shall hire staff with qualifications satisfactory to the Bank to carry out the Project manager functions of the respective Project Implementation Unit (PIU), and thereafter operate and maintain throughout Project implementation, each of the PIU with composition, resources, terms of reference and functions acceptable to the Bank.

Sections and Description
Not later than 30 days after the Effective Date, the Borrowers shall appoint or ensure the appointment of representatives to, and periodically convene and ensure the appropriate functioning of, a Project Steering Committee for each one of the countries.

Sections and Description
Not later than 90 days after the Effective Date, the Borrowers shall establish, and maintain throughout the duration of the Project, an evaluation committee to conduct the technical and financial evaluations, and make final selections, of business proposals and business plans under Part 1 of the Project in each country.

Sections and Description
Not later than 60 days after the Effective Date, the Borrowers shall finalize the procurement of the main technical service provider to provide training and technical assistance under Part 1 (c and f) of the Project, Part 2 (c) and Part 3 (c) of the Project for each country.

Sections and Description
The Borrowers shall extend the Matching Grants and Vouchers to AAs and FFs, respectively, only after executing Subproject Agreements with each recipient AA and FF, on terms and conditions approved by the Bank.

Sections and Description
The Borrower shall carry out the Project in accordance with the Project Operational Manual, which shall be satisfactory in form and substance to the Bank.

Sections and Description
The Borrower (Grenada) shall prepare and furnish to the Bank before January 15th each year during the

implementation of the Project, a proposed Annual Work Plan and Budget satisfactory to the Bank for each country.

Sections and Description
The Borrowers shall ensure that the Project is carried out in accordance with the respective Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF).

Sections and Description
Prior to the commencement of any civil works under the Project, the Borrowers shall (a) submit to the Bank for its approval any required Resettlement Action Plan (RAP), Environmental Management Plan (EMP), and Pest Management Plan (PMP), (b) ensure the provisions of any RAPs, EMPs and PMPs are adequately included in the proposed contracts for works; and (c) ensure that the such instruments are disclosed and, unless the Bank shall otherwise agree, all related, adequate compensation amounts are paid in full, all in accordance with the related RAPs, EMP, PMPs, the RPF and the ESMF, as may be relevant.

Conditions

Type	Description
Effectiveness	For the effectiveness of Grenada's IBRD Loan Agreement for this Project, Grenada shall have taken all measures to properly execute and approve the IDA Financing Agreement between the Association and Grenada for this Project.

Type	Description
Effectiveness	For the effectiveness of Grenada's IDA Financing Agreement for this Project, Grenada shall have taken all measures to properly execute and approve the IBRD Loan Agreement between the Bank and Grenada for this Project.

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Eli Weiss	Team Leader(ADM Responsible)	Senior Rural Development Specialist	GFA04
Sonia Cristina Rodrigues Da Fonseca	Procurement Specialist(ADM Responsible)	Senior Procurement Specialist	GGO04
Isabel Alvarez Ortega	Procurement Specialist	Procurement Consultant	GGO04
Eduardo Franca De Souza	Financial Management	Financial Management	GGO22

	Specialist	Specialist	
Cristina Elizabeth Coirolo	Team Member	Young Professional	GSU04
Guzman P. Garcia-Rivero	Team Member	Operations Advising Consultant	GFA04
Johannes Georges Pius Jansen	Team Member	Senior Agriculture Economist	GFA12
Lisa Lui	Counsel	Lead Counsel	LEGLE
Michael J. Darr	Safeguards Specialist	Environment Consultant	GEN04
Rachael Themora Levy	Team Member	Assistant	GFA04
Silvia Del Pilar Larreamendy Ricardo	Safeguards Specialist	Social Consultant	GSU04
Tatiana Cristina O. de Abreu Souza	Team Member	Finance Officer	WFALA

Extended Team

Name	Title	Organization	Location

OECS COUNTRIES
AGRICULTURE COMPETITIVENESS PROJECT

TABLE OF CONTENTS

I. STRATEGIC CONTEXT

A. Regional and Country Context

1. **The small countries of the Organisation of Eastern Caribbean States (OECS)[1] have traditionally encountered a number of development challenges, coupled with low growth, high debt, and limited fiscal space to maneuver around these problems.** Agricultural exports and tourism were the main drivers of economic growth in OECS countries in the 1980s, which reached roughly 6 percent per year on average in the region. Growth and external trade began to decline in the late 1990s, after the European Union (EU) withdrew preferential access for traditional OECS agricultural exports (bananas and sugar).[2] Efforts to revive growth and offset exogenous shocks through increased public investment engendered a large public debt and stifled private investment. The global financial crisis in 2008 heavily curbed tourism, remittances, and financial sector activity, while sharply increasing public debt and fiscal imbalances. OECS countries recorded a cumulative drop in output of 6 percent during 2009–12; at the same time, periodic natural disasters continued to batter their infrastructure and economies. OECS economies started to recuperate recently through a steady recovery in tourism and the United States economy. The regional growth forecast for 2017 is positive, based on improving performance in key sectors (tourism, construction, agriculture) and lower fuel prices. Over the medium term, average growth for the region is expected to accelerate to about 2.5 percent.

2. **OECS countries have not reduced poverty and unemployment rates to levels compatible with their per capita income levels.** Official poverty rates are 30.2 percent in Saint Vincent & the Grenadines (SVG) and 37.7 percent in Grenada; poverty is concentrated in rural areas.[3] The financial crisis and reduced demand for OECS exports and services have aggravated unemployment, which was already high. Unemployment (28.9 percent in Grenada and 18.8 percent in SVG) is higher among youth, exceeding 30 percent in both countries. Female-headed households, which account for two-thirds of all households in the OECS, are more likely to be poor.

B. Sectoral and Institutional Context

3. **Agriculture is a critical element for improving rural incomes, employment, and food security for OECS countries and farmers, however, it has not adapted rapidly to the changing trade regime.** For example, SVG's banana exports declined significantly; Grenada's banana exports collapsed, and its nutmeg and cocoa production were devastated by Hurricanes Ivan (2004) and Emily (2005). Consequently, agriculture's contribution to GDP, which was 13.4 percent in Grenada and 21.2 percent in SVG in 1990, was 5.4 percent in Grenada and 7.5 percent in SVG two decades later. The fact that agriculture remains a major contributor to employment, representing about 11 percent of the labor force in Grenada and 26 percent in SVG, indicates a productivity, diversification and marketing problem.

[1] Established in 1981, this inter-governmental organization promotes economic harmonization and integration, human and legal rights, and good governance. It has seven founding and full members (Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, and St. Vincent & the Grenadines) and two associate members (Anguilla and the British Virgin Islands—British Overseas Territories). Martinique (France) joined in 2015 but is not represented by the OECS diplomatic mission.
[2] Governed by the Lomé Convention (1975) and its successor, the Cotonou Agreement, these trade arrangements included special protocols for EU imports of bananas and sugar. The EU initiated reforms for banana imports in 1999 and sugar in 2006.
[3] Specific figures on rural poverty are not readily available, but government studies and agricultural sector reviews reveal that most poor people in the OECS reside in rural areas.

4. **OECS agriculture could drive sustained gains in employment and income, while reducing dependence on imported food, if strategic investments are made to improve agricultural productivity and increase access to markets.** Investment opportunities exist along the two main pathways for developing agriculture: import substitution and export expansion. For instance, Grenada produces nutmeg and cocoa of exceptional quality, in high demand internationally. Each product has only one principal exporter (public rather than private—the Grenada Cooperative Nutmeg Association and Grenada Cocoa Association), but the market for processing these products is open, and Grenada has two chocolate factories and a plant to produce medicines from nutmeg. Nutmeg and mace still lead Grenada's agricultural exports, and it has also had success exporting soursop, citrus fruits, cloves, ginger, cinnamon, and fish, while agro-processing (pepper sauces, jams, juices) is becoming more important for the export market. SVG has started to export eddoes and dasheen (taro), arrowroot starch, roots and tubers, ginger, coconuts, spices, pineapples, and peppers, mostly to regional markets and the United Kingdom (UK). However, key investments are required to increase competitiveness to gain extended and sustainable access to regional and international markets.

5. **Local produce could potentially substitute for some imported produce in the tourism sector as well as in local and regional markets.** Agricultural imports have increased in volume, variety, and value as tourism, supermarkets, and incomes have grown. The volume of OECS agricultural imports—mainly meat (especially poultry), cereals, and dairy products—is now about four times higher than the volume of agricultural exports. The World Bank estimates that 68 percent of food demand from the tourism sector is met through imports, representing around 20 percent of OECS agricultural imports. Locally produced fruits and vegetables appear to have the greatest import substitution potential, given high local demand, competitive production costs (in some cases), high perishability of these products, their ability to grow in most OECS countries, and their suitability for production even on small farms. Apart from hotels, the expanding yachting and supermarket sectors offer opportunities for local food producers. The freshness of local produce, as well as of fish and seafood, and better transport times and costs represent major advantages and opportunities for local farmers and fishers where supermarkets and hotels will pay a premium for freshness. While for some locally grown products the cost of production is simply too high to compete with imported products, in some cases local fresh produce has the potential to be competitive.[4]

6. **A major consideration in this context is that the peak agricultural season is out of sync with the peak tourism season, impacting food demand, availability, and prices.** Local demand for high-quality food peaks in mid-December to mid-April, the high season for tourism in the Caribbean, and falls precipitously afterward. On the other hand, agricultural production peaks in the wet season (June–November, coinciding with the hurricane season), which is becoming less predictable and drier with climate change. During the December–May dry season, the absence of intensive irrigation to sustain horticultural production significantly reduces the consistent supply of local produce. Owing to the lack of storage facilities and farmers' tendency to produce the same products at the same time, the oversupply of certain crops in the wet season leads to food losses, lower food prices, and declining farm revenue. Key strategic investments to ensure a sustained supply all through the year, to promote proper storage, and to diversify markets, seem to be essential for the sector to develop.

7. **In sum, the main barrier to purchasing more local produce is the limited ability of local farmers**

[4] Jansen, Hans, Adam Stern, and Eli Weiss (2015), "Linking Farmers and Agro-processors to the Tourism Industry in the Eastern Caribbean," Report No. ACS16280, World Bank, Washington, DC.

to deliver the required quantity and quality of produce in a timely, consistent, and competitive manner. Most farms are small and lack the inputs, equipment, infrastructure, and farm management skills (including production planning, crop management knowledge, and post-harvest handling capacity) to become reliable suppliers. Hotels belonging to large international chains prefer to purchase in bulk from Miami to get guaranteed quantities and volume discounts, rather than to deal with the uncertainty of sourcing large quantities locally from many small farmers. Recently established large hotels received government concessions to import duty free. Lacking such options, small and medium-sized hotels purchase from multiple local farmers and other sources to meet demand, which can be time consuming. They benefit from greater freshness (produce typically is picked and transported to hotels on the same day) and lower transport times and costs, but must cope with the inconsistent quantity and quality of produce, as well as the limited variety and overall quantity.

8. **The rudimentary market structure for fresh produce, including the lack of aggregation of smallholder supplies, results in suboptimal market performance.** The limited aggregation of produce reduces smallholders' access to assured and remunerative markets (and a more stable income), complicates buyers' purchasing operations, and creates a disincentive to buy locally. Virtually all marketing of fresh local produce in OECS countries is done by individual farmers, and until they harvest, many do not know where or to whom they will sell. OECS countries have few producer or marketing organizations to remedy these problems, and such organizations generally suffer from financial problems, unstable and limited membership, side-selling, and mistrust. An added complication is that the public sector (typically ministries of agriculture) actively purchase and market produce through marketing boards that typically run at a loss, fail to provide remunerative prices to farmers, and crowd out private marketing activity. Poor communication and coordination between supply and demand complicate the planning of farm production and create uncertainty for buyers and sellers.

9. **The agro-processing industry is not well developed.** Several small and medium enterprises (SMEs) produce a range of products, but difficulties in obtaining financing on affordable terms limit the investments in infrastructure, equipment, and inputs required to scale up and generate consistent profits. Many agribusiness entrepreneurs lack technical skills and knowledge to develop viable business plans, make the required investments, develop a network of reliable farmer-suppliers, and comply with the quality, food safety, and certification standards enabling them to penetrate profitable markets. The food processing industry cannot absorb all the produce offered, yet at the same time processors cannot obtain consistent supplies of quality produce. This mismatch between local production and industry demand, while partly related to seasonality, is mainly an organizational and marketing problem. As in marketing, in agro-processing public sector initiatives (largely unsuccessful) have crowded out the private sector.

10. **A combined production-marketing system, based on private sector aggregators of smallholder produce and agro-processors, could address most of these constraints and improve international competitiveness.** Promising models are based on aggregation by private sector actors, who purchase from small-scale producers and give them a market for their produce. Apart from aggregating, storing, and marketing produce, aggregators can add value to certain products through basic activities such as washing, packaging and cutting, and can potentially offer support and services for producers (planting material, agro-chemicals, technical advice). Some producer organizations in Grenada and SVG could possibly act as aggregators and should be supported to do so, but they cannot succeed alone. Private actors—traders, wholesalers, or even larger (lead) farmers—need to step in and assume the required organizational and aggregation roles. Agro-processors can adopt the same model, in which smallholder farmers produce in accord with a plan agreed with the processor and embodied in a written contract.

11. **The Productive Alliance (PA) methodology, successfully tested in several projects in the LAC region, could help to resolve major constraints on producers' access to markets.** The PA methodology, introduced during the early 2000s in Latin America and more recently to other regions, engages with the private sector to enable smallholders to meet market demand for produce in terms of quantity, quality, and timeliness. The traditional PA approach involves three core agents: a group of smallholder producers, one or more buyers, and the public sector, while more advanced versions include technical service providers and lenders. These agents are connected through a business plan, which describes producers' needs for capital and services and proposes improvements—attained through productive investments, technical assistance (TA), and business development—to upgrade their production capacities and skills and strengthen their linkage with markets. Evidence shows that the PA approach increases productivity, market integration, production, sales volume, prices, and smallholders' incomes; generates on-farm and non-farm employment; and facilitates the inclusion of vulnerable groups in commercial value chains.

12. **The proposed project is well aligned with the revised OECS Regional Plan of Action for Agriculture (2012–2022) and national development plans.** The priority of the Regional Plan of Action is to promote a market-oriented agribusiness approach to alleviating poverty and food and nutrition insecurity, consistent with the proposed project. Another priority is to mainstream climate change mitigation and adaptation strategies in agricultural programs to protect food production systems and build resilience against tropical storms, heavy rains, and droughts in rural/farming communities, which the proposed project will do. At the national level, the Project is aligned with the National Economic and Social Development Plan (2013–2025) of SVG, which among other objectives for agriculture seeks to increase productivity, efficiency, and competitiveness; increase market access for agricultural produce; and increase agricultural exports; as well as with the National Agricultural Plan (2015-2030) of Grenada, which among other objectives seeks to increase exports to regional and international markets, reduce dependency of food imports and strengthen the linkages between tourism and agriculture.

C. Higher Level Objectives to which the Project Contributes

13. **The proposed project directly promotes the World Bank Group's Twin Goals and contributes to key longer-term objectives.** The project directly responds to the Bank's overarching Twin Goals (eradicating extreme poverty and promoting shared prosperity) by working toward the longer-term objectives of decreasing rural poverty, enhancing rural employment, decreasing the food import bill, and increasing the resilience of smallholder farmers to climate variability.

14. **The project aligns with the World Bank Group's FY2015–19 OECS Regional Partnership Strategy (RPS)[5], which seeks to foster sustainable, inclusive growth by strengthening the competitiveness of the leading sectors of OECS economies.** This proposed project is directly contributing to the second RPS outcome on increased tourism benefits, with stronger linkages to agribusiness, including its indicators on increased demand for food sourced locally by the tourism sector (indicator 2) and the number of organized agro-producers, who have adopted the technology being promoted and who sell their product to the tourism sector (indicator 3).

15. **Finally, the project is well positioned to contribute to the climate change policies and measures of Grenada and SVG, outlined in their Intended Nationally Determined Contributions (INDCs).** The INDCs of both countries emphasize improving climate change adaptation in the priority sectors of tourism and agriculture. By taking climate change into consideration as an emerging risk and reflecting adaptation and

[5] Discussed by the Executive Directors on November 13, 2014 (Report Number 85156)

mitigation in its design and implementation, the project provides a framework to achieve some of the INDC commitments. The project includes strategic investments, both at the level of the public and the private sectors, to promote the development, dissemination and adoption of innovative technologies that would significantly contribute to decrease vulnerability to climate variability and, therefore, generate climate mitigation and adaptation co-benefits.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

16. The proposed Project Development Objective (PDO) is to enhance access to markets and sales for competitively selected farmers and fishers, as well as their allied aggregators and agro-processors, in Grenada and St. Vincent and the Grenadines.

B. Project Beneficiaries

17. The main beneficiaries of the proposed project include:

(a) Small-scale individual or organized farmers and fishers (FFs).
(b) Aggregators and agro-processors (AAs), including: (a) producer organizations (associations, cooperatives or similar formal organizations with legal standing); and (b) SMEs, such as wholesalers, traders, lead farmers (with legal standing to act as aggregator), and industrial agro-processors.
(c) The respective ministries of agriculture, as well as their extension officers and staff, which will be strengthened by the Project.

18. Detailed criteria for eligibility of FFs and AAs for receiving matching grants under the project have been defined in the Project Operational Manual (POM). The FFs and AAs will be eligible only if they are formally participating together in a strategic productive alliance approved by the project to pursue the stated objectives. It is expected that the Project will have 1,700 direct beneficiaries, of which at least 25 percent will be female and 25 percent will be below the age of 40 years.

C. PDO-Level Results Indicators

19. The proposed PDO indicators are identical for both countries (with different quantitative targets for each country):

(a) Market Access Compliance Score for participating FFs supplying products to their allied AAs in accordance with the agreed Business Plans per semester (this Score is a weighted average of the volume complying with the agreed terms of the business plans related to quantities, quality, and timeliness of delivery).
(b) Market Access Compliance Score for sales from all participating AAs complying with buyers' specifications as per their Business Plans per semester (weighted average of volume complying with quality, quantities, and timeliness of delivery).
(c) Percentage increase in the average annual sales of FFs participating in strategic alliances under the project.
(d) Percentage increase in the value of gross sales made by AAs participating in the project to their final buyers.
(e) Direct project beneficiaries (number), of which female (%) and young (%).

III. PROJECT DESCRIPTION

A. Project Components

20. The scope of the proposed project is based on successful experiences with productive alliances (PA) in other operations supported by the World Bank in the region, adapted to the specific conditions of small island economies such as Grenada and SVG. As noted, the PA approach is intended to improve access to markets for AAs and small-size FFs, using the private sector as a vehicle to foster smallholder production in accordance to market demand in terms of quantity, quality, and timeliness. The main components, apply to both borrowing countries[6].

Component 1: Support for Preparation of Business Plans (Costs: Grenada IBRD: US$ 0.38m; SVG IDA: US$0.40m)

21. The objective of this component is to: (a) promote an understanding of the Project's scope and objectives through outreach to potential stakeholders and beneficiaries (such as individual and organized FFs, AAs, buyers, and lenders); (b) identify potential business opportunities for prioritized value chains and their translation into viable and profitable business proposals; and (c) prepare full business plans for selected proposals.

22. This component will finance the provision of goods, consulting and non-consulting services, training and operating costs in support of implementing pre-investment activities, including:

(a) development and implementation of a communication and information dissemination strategy to raise awareness of the Project and its activities;
(b) organization of networking events, including business roundtables and local workshops for supporting the formation of strategic alliances between aggregators and agro-processors ("AAs") and farmers and fishers ("FF"), buyers, and lenders;
(c) provision of Training to AAs, FFs and buyers to identify business opportunities and to translate them into viable business proposals;
(d) implementation of a country-wide call for interested parties to present business proposals;
(e) evaluation of business proposals, and selection of those proposals to be developed into business plans;
(f) provision of technical assistance for the preparation of sustainable and competitive business plans;
(g) evaluation and selection of final business plans, and the preparation of Subproject Agreements for those selected plans; and
(h) analysis of the qualifications of input suppliers eligible to participate in the voucher program under Component 2 of the Project.

23. A Technical Assistance Agreement between the borrowing countries and the Food and Agriculture Organization (FAO) of the United Nations, financed by contributions from the credit proceeds of both countries, will include TA support for the implementation of activities described under (c), and (f) above.

Component 2: Implementation of Business Plans (Grenada: IDA US$2.20m; IBRD US$ 0.22m; beneficiaries: US$ 0.64m; SVG: IDA US$2.95m; beneficiaries: US$ 0.72m)

[6] The terms "Borrower" or "borrowing counties" are used throughout the document with the meaning of the borrower of IBRD loan or the recipients of IDA credits (individually or collectively), indistinctly.

24. The objective of this component is to provide matching grants to co-finance the implementation of technically feasible, financially viable, economically profitable, socially responsible, and environmentally sustainable business plans, which, when implemented, will contribute to a consistent and timely supply of sufficient quantities of quality produce to buyers while providing a reliable income to allied FFs. The implementation of these Business Plans will make possible an increase in productivity and quality of the products, as well as reducing dependency on rainfall, thus increasing supply during peak season and reducing vulnerability to climatic factors. In addition, Component 2 is expected to provide climate change co-benefits derived from: (a) adaptation, by promoting innovative resource management practices to increase resilience, expanding the use of crops and crop mixes/rotations less vulnerable to climate variability, and expanding the use of protected agriculture and drought/heat resistant varieties; and (b) mitigation, by promoting agricultural intensification using higher yielding varieties, carbon sequestration species and cropping patterns, improving irrigation measures and replacing traditional sources of energy (see Annex 4).

25. This component will finance:

(a) The implementation of a matching grant and voucher program, including the provision of:

(i) training for capacity building to AAs receiving matching grants (such as in logistics, storage, marketing, agronomy, accounting, financial literacy, food processing, good manufacturing practices, packaging, labelling, traceability, quality control, food safety and hygiene, legal and environmental aspects) and FFs receiving vouchers (such as in good production practices, modern and improved technologies, climate-smart agriculture, post-harvest handling, and financial literacy); and

(ii) support in supervising the implementation of the selected business plans, including assisting the PIUs to put in place a technical supervision and implementation support system, capable of following up the implementation of the Business Plans making sure they follow the approved Plans and detecting real or potential issues that could compromise the expected results of the Plans or their effectiveness.

(b) Provision of matching grants to eligible AAs, and vouchers to eligible FFs, which are allied with the respective AAs, for the purpose of implementing the business plans selected under Component 1 of the Project, and co-financing investments under said plans, including:

(i) for the selected AAs: (A) equipment (transport, office, ICT tools/mobile applications, cold storage, product processing, and so on), infrastructure (such as storage/warehouse and cold chain facilities) and other related inputs, and (B) technical assistance and specialized Training related to their respective business plans; and

(ii) for the selected FFs: (A) farming equipment, infrastructure and other related inputs (such as equipment for land preparation and harvesting, irrigation infrastructure (including rainwater harvesting structures and pressured irrigation, greenhouses, tunnels, hydroponics, aquaponics, and so on), and (B) fishing equipment, infrastructure and other related inputs (such as boats and fishing implements, logistics, temporary cold storage)

(c) Provision of (i) technical assistance and Training on procurement to AAs receiving Matching Grants, and (ii) specialized Training, in relation to the implementation of the relevant business plans, to FFs receiving Vouchers.

26. The Technical Assistance Agreement to be signed between both countries and FAO to be financed under the Project will include necessary technical support for the implementation of activities described under (a) above, unless such activities constitute a conflict of interest with the services provided under this assignment.

27. Each business plan will need co-financing from the AA (at least 20 percent of the AA investments for producer organizations and at least 50 percent for other private sector AAs). At least 10 percent of the AA costs of the subproject[7] will have to be allocated upfront in cash by the beneficiary. The rest of the counterpart financing of the business plan will have to be covered by the beneficiaries from their own funds or through resources provided by other lenders (banks, credit unions, development banks, private sector, etc.). Proof of the availability of resources secured in advance from these sources will be a condition to start implementation of a subproject. Producer organizations with potential will be encouraged to participate as AA; however, to give them better opportunities to participate as AAs, they will not compete directly with other private sector AAs in the selection process. Weaker producer groups will participate as FFs in alliance with an AA, and they will receive TA in organizational and institutional strengthening to help them become an AA in the future.

28. The mechanisms to finance subprojects will be different for AAs and FFs:

(a) **For AAs**: The procurement of investment items included in the Subproject will be undertaken by the AAs for small works, goods, and individual consulting and non-consulting services, under a threshold further defined in the POM. Above the specified threshold, and for all consulting services by firms regardless of value, all procurement for the benefit of the AAs will be undertaken by the Project Coordination Unit (PCU)[8]. The PCU will have a fiduciary control function of the procurement undertaken by the AAs and will provide TA and support to improve the procurement capacity of the AAs. Under this proposed mechanism, each beneficiary AA will receive funds in a specific bank account opened by the AA for its exclusive use while implementing the subproject. The counterpart funds from the AA are expected to be deposited in the same specific account as a precondition for disbursing project funds, which will be sequenced in line with physical progress in accordance with the Subproject Agreement and the related schedule in the Subproject Procurement Plan. This matching-grants for the AAs would have a maximum of $120,000 for productive investments and a maximum of $20,000 for specific technical assistance for implementation.

(b) **For FFs:** The project will implement a voucher mechanism to provide financial assistance to FFs. The investments to be supported by the sub-grants will be partially financed by vouchers issued by the PCU in the name of the benefitting FFs (in accordance with the terms of the respective business plans and the corresponding Subproject Agreement). The FFs will use these vouchers to complement their own funds in purchasing the specific approved items, as confirmed and approved by the PCU, from a local supplier selected by them from a list of suppliers approved beforehand by the PCU. The maximum allowed for each individual beneficiary FF will be $8,000 and for a total of $120,000 for all the FFs in a single Subproject Agreement. In addition, the FFs will receive free general training and extension services from FAO in collaboration with each

[7] The term "Subproject" means any activity and/or investment under a selected Business Plan to be implemented under component 2, and comprises all the investments required at the FF and AA levels as well as the TA needed to accompany these investments (including institutional strengthening) and to comply with the terms of the marketing agreement.
[8] To simplify, the PAD uses the acronym PCU for both countries, although the PCU in SVG is called PSIPMU.

Ministry of Agriculture and more specialized TA from other TA providers directly procured by the PCUs

Component 3: General Agricultural Services and Enabling Environment (Grenada IBRD: US$0.54m; SVG IDA: US$0.25m)

29. The objective of this component is to strengthen general agricultural public services directly linked to the subprojects described in Component 2 and needed to enhance the probability of success. It will also support the strengthening of the overall enabling environment needed for the sustained development of the business enterprises with potential competitive advantages, locally and internationally. The project will finance goods, works, consulting and non-consulting services, training and operating costs (travel, per diem, etc.) to help implement the key activities under the component. This component will contribute to generate climate change co-benefits in two main areas: (a) promotion and incorporation of techniques more resilient to climate variability into public extension services practices; and (b) mitigation, by conducting basic research as well as introduce new technologies that reduce GHG emissions in crop production and fisheries, as well as promoting the adoption of new systems increasing carbon sequestration (see Annex 4). A TA Agreement to be signed with FAO will include technical support for the implementation of activities under (c), as described below.

30. The main activities under this component are to:

(a) improve the quality and availability of key inputs required for the adoption of more productive technology (such as quality seeds, seedlings, and planting materials) for products supported under Component 2 of the Project;
(b) organize, and facilitate participation in, trade fairs and study tours;
(c) strengthen agricultural public extension service providers' knowledge and skills to effectively (i) support the selected AAs and FFs to adopt technology for the efficient implementation of their business plans under Component 2 of the Project, and (ii) communicate and disseminate information broadly across the agricultural sector;
(d) carrying out technical studies to competition improve competitiveness, including market studies, analysis of new potential value chains, enabling environment, reforms, agro-food logistics, and food safety requirements and quality standards (including legal framework) and related technical skills; and
(e) carrying out improvements to public infrastructure that are required for the promotion of adequate internal distribution of produce, reduction of post-harvest losses, establishment of modern food safety mechanisms, as well as cold storage at key exit points for perishable agricultural exports (e.g., airports/port terminals).

Component 4: Project Management, Monitoring, and Evaluation (Grenada IBRD: US$0.66m; SVG IDA: US$0.70m)

31. The objective of this component is to ensure effective project implementation, monitoring of activities and final project evaluation. The project will finance goods, consulting and non-consulting services, training and incremental operational costs to the PCU and the PIU for expenditures related to the project activities, including: (a) project coordination and management; (b) monitoring, evaluation, and impact assessment; (c) fiduciary administration, accounting and financial/technical audits; (d) safeguards management; and (e) a citizens' engagement mechanism.

B. Project Cost and Financing

32. The project will be financed by: (a) an IDA US$4.3 million credit to SVG; (b) an IDA US$2.2 million credit for Grenada; and (c) an IBRD US$1.8 million loan to Grenada (see Table 1 below). When counterpart funding from the beneficiaries is included (estimated at around $1.36 million), the total cost of the project is estimated at around US$9.66 million.

Table 1: Project cost and financing by component and country (US$ millions)

Project component	IDA Credits	IBRD Loan	Beneficiaries' contribution	Total costs
GRENADA				
1. Support for Preparation of Business Plans		0.38		0.38
2. Implementation of Business Plans	2.20	0.22	0.64	3.06
3. General Agricultural Services and Enabling Environment		0.54		0.54
4. Project Management, Monitoring, and Evaluation		0.66		0.66
Subtotal	**2.20**	**1.80**	**0.64**	**4.64**
ST. VINCENT & THE GRENADINES				
1. Support for Preparation of Business Plans	0.40			0.40
2. Implementation of Business Plans	2.95		0.72	3.67
3. General Agricultural Services and Enabling Environment	0.25			0.25
4. Project Management, Monitoring, and Evaluation	0.70			0.70
Subtotal	**4.30**		**0.72**	**5.02**
TOTAL PROJECT COSTS	**6.50**	**1.80**	**1.36**	**9.66**

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

33. **Overall implementation responsibility.** In each country, a Steering Committee (SC) will be formed by representatives of government ministries and agencies considered relevant for a successful project implementation and the achievement of its objectives, as well as from the private sector, to provide overall guidance and support for project implementation and ensure proper inter-institutional coordination. This committee will approve the annual Project Operating Plans and requests for budgetary allocations, and it will provide opinions on possible restructuring or adjustments in the project's approach, methodology, and focus. The final constitution of the SC will be defined in the POM.

34. **Overall responsibility for financial management (FM), procurement, and safeguards for the proposed project will rest in the existing PCU in each country.** In Grenada, the existing PCU is located in the Ministry of Finance and Energy (MoFE). In SVG, the PCU is the Public Sector Investment Program Management Unit (PSIPMU), which is based in the Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour (MoEP). Both have executed Bank-financed operations for several years, but their capacity is limited. FM, procurement, and safeguards assessments of the PCUs were completed at appraisal to determine any needs for further strengthening of these functions under the project, either by providing additional staff or contracting consultants to efficiently implement the fiduciary and safeguard aspects of the proposed project.

35. **Overall responsibility for technical implementation will rest within the line ministries of**

agriculture (MoALFF in Grenada; MoAFFRT in SVG), through a small PIU in each country. In principle, each of these PIUs will consist of at least a Project Manager and an Agribusiness Monitoring and Evaluation Specialist. 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, and (d) monitoring and evaluating the Project. Very close collaboration between the PIU and the PCU will be crucial.

36. **Technical Assistance (TA).** The main focus of this TA is to support the preparation and implementation of effective and sustainable business plans at the FF and AA levels and to strengthen the capacity of the respective ministries of agriculture to deliver the services needed to improve production and competitiveness. The TA services, together with the investments included in the business plans (for AAs and FFs), are the two main pillars of the project, complementing each other and aiming to achieving the development objectives. Grenada/SVG, through each PCU, will enter into a contractual agreement with a technical service provider to receive specific assistance and guidance in key aspects of project implementation. The two borrowing countries have expressed their preference to engage a single service provider for covering the key phases of the business plan cycle (from identification/preparation of Business Plans to the supervision of implementation), ensuring a consistent approach and methodology. The two governments have requested that FAO serve as this main technical service provider, given the organization’s long engagement with both countries and its presence in the region, as well as its worldwide experience with agricultural competitiveness and technology development issues.

B. Results Monitoring and Evaluation

37. The PIUs will oversee the establishment of a monitoring and evaluation (M&E) system to track technical, financial, social, and environmental progress and results of the project. This M&E system will monitor the project’s performance in relation to the baseline situation by tracking inputs and outputs and continuously quantifying progress toward the PDO and intermediate results indicators included in the Results Framework. A baseline will be established very carefully for each one of the business plans that is approved, and the results for that plan will be monitored throughout implementation. The PIUs will be responsible for carrying out a Mid-Term Review and Final Evaluation.

C. Sustainability

38. The sustainability of PAs will be developed through rigorous design and independent assessment of technical, financial, and institutional viability. Alliances in which the main interests of FFs (higher income) and AAs (volume and product quality) coincide are likely to be sustainable in the long run. In addition, the capacity of FFs to grow and respond to changes in market conditions will be improved by strengthening their managerial capacity and providing TA, including differentiated support for women and younger leaders. Long-term sustainability will be improved by helping to strengthen the state-wide institutional framework that supports rural services, specifically by supporting modern institutional arrangements, enabling TA mechanisms, and promoting sustainable management models for providing rural services. Interventions will incorporate measures and technologies aimed at reducing agro-climatic vulnerability to increase the resilience of production units exposed to climate variability and drought.

V. KEY RISKS

39. The overall risk rating for the project is “Substantial.” The main sources of risk identified are:

(a) **Institutional capacity for implementation and sustainability.** The main implementing agencies (the PIUs in the line ministries) have limited capacity in implementing World Bank-financed projects. At the same time, the agencies that will provide oversight (the PCUs) are already actively implementing several donor-financed projects, including those of the Bank. To manage these risks, the PIUs and PCUs will be strengthened with additional staff covering the full range of technical and administrative and managerial areas needed to ensure effective implementation of the proposed project.

(b) **Fiduciary risk.** Financial management and procurement capacity needs strengthening, given the limited capacity of the PCUs in both countries implementing World Bank-financed projects. Financial Management and Procurement Assessments were undertaken to identify capacity gaps in the PCUs and ensure that appropriate training, capacity building and TA is provided to overcome these gaps.

(c) **Technical design of project.** The PA approach is new for both countries and it is difficult to foresee the quality of subproject proposals from different subsectors and the diverse types of business plans. To ensure that proposals are appropriate and of high quality, intensive TA and oversight will be provided, as well as a rigorous analysis before approval, together with close monitoring of their implementation.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

40. **A detailed financial and economic analysis was undertaken for this project**. To obtain an ex ante indication of the financial and economic soundness of the various types of investments likely to be financed, financial models for potential aggregation schemes and associated investments were constructed using information gathered during preparation, through interviews and work sessions with potential AAs, buyers, and FFs and their organizations. Findings for possible proposals involving fruits and vegetables, cocoa, nutmeg, coconut water agro-processing, flowers, fisheries, and poultry production value chains development are presented in Annex 3. The Financial Rate of Return (FRR) would average 37.2% and the Net Present Value (NPV) with 6% discount rate would be US$22.25 million. The gross value of production of the beneficiaries in Grenada and SVG would grow from about US$20.47 to US$60.67 million and net revenues from US$3.37 to US$8.32 million. The expected Economic Rate of Return (ERR) after all project costs would be 15.9% and the NPV US$13.21 million.

B. Technical

41. **The technical design of the project is based on analytical work carried out by the World Bank Group before project preparation and lessons learned from other projects using a similar approach.** Lessons learned from the Grenada Small Farmers Vulnerability Reduction Project (P124107, implemented 2010–13), contributed directly to the design of the voucher system to be implemented under the proposed project. Findings and recommendation from recent analytical work on developing linkages between producers, processors, and the tourism industry (Jansen, Stern, and Weiss 2015), as well as from conclusions from another recent study on matching grants (Coste and Hristova 2016) were taken into consideration. Finally, the project incorporates lessons from similar projects in the region that use the PA

approach, which were summarized in a recently published study “Linking Farmers to Markets through Productive Alliances: An Assessment of the World Bank Experience in Latin America” (World Bank 2016).

C. Financial Management

42. **The PCUs in Grenada and Saint Vincent and the Grenadines will undertake all fiduciary aspects of the Project.** The Bank performed a financial management (FM) assessment of the proposed arrangements for this project in both countries, in accordance with OP/BP 10.00 and the FM Practice Manual (issued by the Financial Management Sector Board on March 1, 2010). Both proposed entities are implementing agencies with good knowledge of World Bank financial management policies and procedures. The FM assessment has concluded that the PCU in Grenada’s MoFE has adequate financial management systems in place that can provide, with reasonable assurance, accurate and timely information on the status of the funds as required by the Bank. The FM assessment conducted in the PCU for SVG (PSIPMU), located in the MoEP, concluded that it has adequate financial management systems in place that can provide, with reasonable assurance, accurate and timely information on the status of the funds as required by the Bank.

D. Procurement

43. **The proposed project was identified as an early adopter of the new World Bank Group procurement policy and regulations**. Procurement will be conducted according to the World Bank’s Procurement Regulations for IPF Borrowers’, issued in July 2016, for the supply of goods, works, and non-consulting and consulting services, and the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006 and revised in January 2011 and as of July 1, 2016. Under the new policy, the Project Procurement Strategy for Development (PPSD) is used to analyze and determine the optimum procurement approach to deliver the right procurement result. The findings of the PPSD analysis inform the Procurement Plan developed for the proposed project.

44. **The PCUs will be responsible for all procurement activities under the project.** They will be directly responsible for the procurement related to all works, goods, and consulting and non-consulting services. The PPSD carried out for both countries entailed a strategic assessment of the operating context and beneficiaries’ capabilities, as well as the market, the different stakeholders, and the risks impacting procurement processes, and it will inform the Procurement Plan. For subprojects supported and implemented under the proposed project, the PPSD concluded that beneficiaries AA will undertake the procurement of small works, goods, and individual consulting services and non-consulting services (under a threshold further described in the POM), in accordance with agreed procedures and using agreed contractual documents specified in the POM.

E. Social

45. The PCUs will be responsible for social safeguards, in collaboration with the PIU. The potential negative social impacts of the project are expected to be moderate, and the relevant instruments have been prepared to address such impacts, which are related mainly to land, participation, and consultations. The ESMF provides guidelines for screening business plans and subproject sites and for undertaking full social assessments, if needed, to analyze social impacts and risks, including but not limited to land acquisition/resettlement/economic displacement. Social assessment identifies population density, identifies patterns of land ownership, and defines the establishment of mechanisms to screen for farm and rural larceny; determines the presence of vulnerable segments of the population in the project area,

including women, the poorest smallholders, as well as young farmers (under the age of 40), to ensure their participation and share in project benefits (including in training and extensions services). A gender plan included in this ESMF guides the approach and activities for assuring women's benefits.

46. Because investments under the proposed project trigger OP 4.12, a regional Resettlement Policy Framework (RPF) has been developed. No project funds will be used for land acquisitions. In case land acquisition is needed, it would have to be entirely and directly financed by the concerned beneficiaries. Activities that could involve involuntary resettlement will be avoided, nevertheless a RPF has been elaborated as a precautionary measure. The RPF defines the resettlement principles, organizational arrangements and the design criteria for individual subprojects to be prepared during project implementation. A project-level Grievance Redress Mechanism has also been developed to provide a way for project-affected people and communities, as well as members of the public, to lodge complaints and/or request information about the project.

F. Environment

47. The PCUs will be responsible for environmental safeguards, in close collaboration with the PIUs. World Bank Safeguard Policy OP 4.01 for Environmental Assessment (EA) is triggered. An analysis of the project and its components was determined that it falls under Category B, due to minor to moderate potential negative impacts from agricultural production, food processing, aquaculture, livestock rearing, and related activities. Given that the details of individual subprojects are not yet known, an ESMF and a RPF were prepared for each country. Separate consultations/workshops were held in each country and comments were incorporated in the ESMF/RPF. The ESMF and the RPF were disclosed in-country and on the World Banks external website to receive comments from stakeholders and general public. The final versions of the ESMF and the RPF were disclosed in-country and in the World Bank external website on April 18, 2017.

48. Natural Habitats (OP/BP 4.04) was triggered as a precaution to ensure that any affected natural habitats are adequately protected, because some of the project sites may take place near parks or protected areas, or may potentially affect lands that meet the definition of natural habitat. The Pest Management Policy (OP 4.09) was also triggered as a precaution, because pesticide use is a necessity in agricultural activities in the region, mainly because of the export potential of some products. Integrated pest management will be promoted as standard practice, and for projects with significant pest management issues a Pest Management Plan will be required to ensure that these materials are well managed. Finally, Physical Cultural Resources (OP 4.11) was also triggered as a precaution in case some excavation or earth-moving activities uncovers any unknown cultural sites.

G. Climate Co-Benefits, Greenhouse Gas Emissions Analysis and Disaster Risk Screening

49. **Climate Co-Benefits**. Since the subprojects under Component 2 are demand-driven and would be competitively selected, a precise assessment of expected climate co-benefits cannot be done. However, the project will actively promote and support: (a) under Component 1, intensive awareness raising and the integration of activities supporting increased adaptation to climate change and climate variability to business plans; (b) under Component 2, adoption of innovations and realization of investments likely to increase mitigation of greenhouse gases (GHG) emissions, as well as increasing carbon sequestration; and (c) under Component 3, the regulatory reforms and institutional strengthening measures needed to improve the productivity and sustainability of the sector, and the strengthening of the public sector extension services to disseminate new technologies to increase overall resilience in the sector. Based on

these basic principles, it is estimated that 55 percent of the investments in Components 1, 2 and 3 (equivalent to US$4.55 million for both countries) will generate climate co-benefits (adaptation and mitigation). This amount represents about 47 percent of total project cost (see detailed analysis in Annex 4).

50. **Greenhouse Gas Emissions Analysis**. The GHG analysis focused on some of the identified value chains and relied on estimates as to how many beneficiaries and hectares would be affected and would be adopting CSA practices. Based on the above assumptions, the Project is a net carbon sink. The emissions reduction and carbon sequestration potential over a period of 20 years would be about 86,640 tCO2 – equivalent. The project activities that are expected to contribute most to the net carbon sink, include the replanting of cocoa, nutmeg and other trees that might have the largest mitigation and carbon sequestration potential with 91,767 tCO2-equ, while the increase of input use on vegetable production, even improving cropping practices, would increase emissions by about 5,126 tCO2-equ over the without project situation, resulting in a net project balance of 86.540 tCO2-equ (see Annex 4).

51. **Climate and Disaster Risk Screening.** The Climate Risk Screening Report established that exposure to the current and future climate and geographical hazards will pose a moderate risk to the project. Both countries have been exposed to a number of climate hazards, including hurricanes, floods and storm surges. The interventions from the project are timely to slow down the pace of their impact. The implementation of the Business Plans under Component 2 will increase resilience by reducing dependency on rainfall and protect plants from higher temperature. Activities under Component 3 will seek to improve and increase the availability of key inputs required for the adoption of more productive and resilient technology (such as quality seeds, seedlings, and planting materials).

H. Other Safeguard Policies

52. World Bank policies on Forests (OP/BP 4.36) and Safety of Dams (OP/BP 4.37) are not triggered by the proposed project, because it will exclude and screen out subproject activities with the potential to affect clearing or exploitation of forest resources, or involving the construction of canals or water conveyance systems. Other safeguards policies were reviewed and not deemed relevant to the project.

I. World Bank Grievance Redress

53. Communities and individuals who believe that they are adversely affected by a World Bank–supported project may submit complaints to existing project-level Grievance Redress Mechanism or to the Bank's Grievance Redress Service. The Grievance Redress Service ensures that complaints received are promptly reviewed to address concerns related to projects. Project-affected communities and individuals may submit their complaint to the Bank's independent Inspection Panel, which determines whether harm occurred, or could occur, because of the Bank's 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, see 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, see www.inspectionpanel.org.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY : OECS Countries
OECS Regional Agriculture Competitiveness Project

Project Development Objectives

The proposed Project Development Objective (PDO) is to enhance access to markets and sales for competitively selected farmers and fishers, as well as their allied aggregators and agro-processors, in Grenada and St. Vincent and the Grenadines.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Market Access Compliance Score for participating farmers and fishers supplying products to their allied AAs in accordance with the agreed Business Plan per semester (on a 0 to 3 scale).		Number	0.00	2.20	Semi-annually	Monitoring data from the AAs.	PIUs with data from AAs
Description: The FFs have to comply with all three main dimensions of the business plan: quantities, quality and timeliness of delivery. The Compliance Score is a weighted average of the volume of products delivered by the FFs complying with these dimensions per semester (i.e., one point per each dimension complied with, on a Score from 0 to 3).							
Name: Market Access		Number	0.00	2.60	Semi-annualy	Monitoring data from the	PIUs with data from

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Compliance Score for sales from all participating AAs complying with the buyers's specifications as per the agreed Business Plans per semester (on a 0 to 3 scale).						buyers	the buyers
Description: The AAs have to comply with all three main dimensions of the business plan: quantities, quality and timeliness of delivery. The Compliance Score is a weighted average of the volume of product delivered to the buyers in compliance with these dimensions, where one point is awarded for each of these dimensions complied with (i.e., 1 for each dimension, on a 0 to 3 scale).							
Name: Percentage increase in the average annual sales of farmers and fishers participating in strategic alliances under the project		Percentage	0.00	20.00	Semi-annually	Business Plans (Baseline) and PIU through monitoring of extension and planning unit of MoA MoALFF	PIU
Description: Average of sales of benefitting FFs during the reporting year divided through the total value of sales in the base year.							
Name: Percentage increase in the value of gross sales made by aggregators and agro-processors participating in the project to their final buyers.		Percentage	0.00	20.00	Semi-annually	Business Plans (Baseline) and PIU through AAs (monitoring)	PIUs
Description: Average of sales of benefitting AAs during the reporting year divided through the total value of sales in the base year.							

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Direct project beneficiaries		Number	0.00	1700.00	Quarterly	Number of benefitting family members (assumption: 3), workers/laborers of FFs (assumption: 1), owners, staff and workers of benefitting AAs (assumption: 5), and benefitting extension officers and staff of MoALFFRT and MoALFF, all of which will be monitored through a registry of beneficiaries.	PIUs
Female beneficiaries		Percentage	0.00	25.00			
Percentage of young direct project beneficiaries		Percentage	0.00	25.00			

Description: Direct beneficiaries are people or groups who directly derive benefits from an intervention (i.e., children who benefit from an immunization program; families that have a new piped water connection). Please note that this indicator requires supplemental information. Supplemental Value: Female beneficiaries (percentage). Based on the assessment and definition of direct project beneficiaries, specify what proportion of the direct project beneficiaries are female. This indicator is calculated as a percentage.

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Number of business proposals submitted and evaluated		Number	0.00	55.00	Quarterly	Monitoring system	PIUs
Description:							
Name: Number of approved business proposals developed into an evaluated business plan		Number	0.00	38.00	Quarterly	Monitoring system	PIU
Description: Number of elaborated business plans							
Name: Private Capital Mobilized		Amount(USD)	0.00	1000000.00	Quarterly	PCU	PIU
Description: The core indicator track the amount of direct financing (in the form of equity and/or debt) mobilized by private entities, using private funding, to finance investments within an IBRD/IDA operation or investments (PE, GE, RE, SF, and GU) directly linked to that operation.							
Name: Participating FFs and AAs adopting an improved agricultural technology promoted by the Project		Number	0.00	350.00	Quarterly	Monitoring system	PIUs

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Female clients (FFs and AAs) who have adopted an improved agricultural technology promoted by the Project		Number	0.00	88.00			
Young clients who have adopted an improved technology promoted by the Project		Number	0.00	88.00			
Description:							
Name: Number of input suppliers that participate and benefit through the voucher system		Number	0.00	20.00	Quarterly	Monitoring system	PIUs
Description:							
Name: Number of public extension officers that were trained		Number	0.00	140.00	Quarterly	Monitoring system	PIUs
Description: To comply the extension officers have to be both trained and have received at least one equipment upgrade (ICT, transport, etc.)							

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Percentage of complaints solved by the Grievance Redress Mechanism of the Project		Percentage	0.00	80.00	Quarterly	Monitoring system	PIUs
Description: Number of complaints that were solved by the Project divided by the total number of complaints received.							
Name: Incrase in labor productivity of benefitting farmers and fishers		Percentage	0.00	10.00	Semestrial	Monitoring system	PIU
Description: Labor productivity defined as the market value (current prices) of the average production of selected products per day of work involved (i.e., for the same product is equal to total value of production divided by days of work needed).							

Target Values

Project Development Objective Indicators

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	YR6	End Target
Market Access Compliance Score for participating farmers and fishers supplying products to their allied AAs in accordance with the agreed Business Plan per semester (on a 0 to 3 scale).	0.00	0.00	1.50	1.70	1.90	2.10	2.20	2.20
Market Access Compliance Score for sales from all participating AAs complying with the buyers's specifications as per the agreed Business Plans per semester (on a 0 to 3 scale).	0.00	0.00	1.50	2.00	2.20	2.40	2.60	2.60
Percentage increase in the average annual sales of farmers and fishers participating in strategic alliances under the project	0.00	0.00	0.00	5.00	15.00	18.00	20.00	20.00
Percentage increase in the value of gross sales made by aggregators and agro-processors participating in the project to their final buyers.	0.00	0.00	0.00	5.00	10.00	15.00	20.00	20.00
Direct project beneficiaries	0.00	0.00	200.00	500.00	1000.00	1400.00	1700.00	1700.00
Female beneficiaries	0.00	0.00	15.00	20.00	25.00	25.00	25.00	25.00

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	YR6	End Target
Percentage of young direct project beneficiaries	0.00		20.00	20.00	25.00	25.00	25.00	25.00

Intermediate Results Indicators

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	YR6	End Target
Number of business proposals submitted and evaluated	0.00	10.00	25.00	40.00	55.00	55.00	55.00	55.00
Number of approved business proposals developed into an evaluated business plan	0.00		8.00	15.00	25.00	38.00	38.00	38.00
Private Capital Mobilized	0.00		100000.00	400000.00	600000.00	800000.00	1000000.00	1000000.00
Participating FFs and AAs adopting an improved agricultural technology promoted by the Project	0.00		40.00	100.00	200.00	300.00	350.00	350.00
Female clients (FFs and AAs) who have adopted an improved agricultural technology promoted by the Project	0.00		10.00	25.00	50.00	75.00	88.00	88.00
Young clients who have adopted an improved technology promoted by the Project	0.00		10.00	25.00	50.00	75.00	88.00	88.00

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	YR6	End Target
Number of input suppliers that participate and benefit through the voucher system	0.00	0.00	10.00	15.00	20.00	20.00	20.00	20.00
Number of public extension officers that were trained	0.00		20.00	80.00	120.00	140.00	140.00	140.00
Percentage of complaints solved by the Grievance Redress Mechanism of the Project	0.00		75.00	75.00	80.00	80.00	80.00	80.00
Incrase in labor productivity of benefitting farmers and fishers	0.00	2.00	4.00	6.00	8.00	10.00	10.00	10.00

ANNEX 1: DETAILED PROJECT DESCRIPTION

COUNTRY: OECS Countries
Agriculture Competitiveness Project

A. Project Development Objective (PDO)

1. The proposed Project Development Objective (PDO) is to enhance access to markets and sales for competitively selected farmers and fishers, as well as their allied aggregators and agro-processors in Grenada and St. Vincent and the Grenadines.

B. Project Components

2. The scope of the proposed project is based on earlier successful experiences from Bank-supported operations using PAs in the region, adapted to the specific conditions of small island economies such as Grenada and SVG. This approach consists of improving small-scale producers' access to markets, using the private sector as a vehicle to align smallholder production with market demand in terms of quantity, quality, and timeliness. The main components of the proposed project are based on the need for improving linkages between demand and supply of agricultural, livestock, and fisheries products. The proposed project will support technically feasible, financially viable, economically profitable, and socially/environmentally responsible business plans through a matching grant mechanism. Furthermore, the project will support preparation of competitively selected business plans led by AAs of agriculture and fisheries products. Implementation of these business plans will be supported intensive TA. The main components of the project, described below, apply to both borrowing countries.

Component 1: Support for Preparation of Business Plans (Grenada IBRD: US$0.38m; SVG IDA: US$0.40m)

3. The objective of this component is to: (a) promote an understanding of the Project's scope and objectives through outreach to potential stakeholders and beneficiaries (such as individual and organized FFs, AAs, buyers, and lenders); (b) identify potential business opportunities for prioritized value chains and their translation into viable and profitable business proposals; and (c) prepare full business plans for selected proposals. Under this component, the proposed project will finance consultant and non-consultant services, goods, training, and operating costs to implement pre-investment activities

4. Under this component, the project would finance goods, consulting and non-consulting services, training and operating costs in support of implementing pre-investment activities, including: The main activities to be implemented in this component are:

(a) **Communication and dissemination.** These activities will support the elaboration and implementation of a communication and dissemination strategy to raise awareness of the project and its activities;

(b) **Networking**. Organization of networking events, such as business roundtables and local workshops, with the objective of forming the strategic alliances between potential AAs and FFs, groups of FFs, buyers, technical service providers, and financial actors that will be needed to prepare business proposals;

(c) **General training** to all interested prospective beneficiaries in methodologies to identify opportunities and prepare adequate Business Proposals;

(d) **Call for Proposals.** Implementation of a country-wide call for interested parties to prepare and present Business Proposals.

(e) **Assessment of business proposals and selection of the ones to be transformed into Business Plans.** The Business Proposals resultant of the call for proposals would be reviewed and assess to determine their quality. Based on a clear and open set of criteria, some of these proposals would be selected and the members of the alliance will be invited to prepare full Business Plans.

(f) **Preparation of Business Plans.** These activities involve TA to potential AAs and allied FFs for the transformation of the selected business proposals into bankable business plans and productive subproject proposals that integrate diverse sources of financing (project grants, commercial financial funds, personal financial contributions, etc.).

(g) **Approval of Business Plans.** Evaluation and approval of Business Plans, and their transformation into Subproject Agreements.

(h) **Pre-Qualification of Suppliers.** Review and pre-qualification of input suppliers eligible to participate in the voucher program under Component 2.

5. A Technical Assistance Agreement between the borrowing countries and the Food and Agriculture Organization (FAO) of the United Nations, financed by the loan/credit proceeds of both countries, will include technical assistance support for the implementation of activities described under (c) and (f) above.

6. A business plan includes: (a) marketing agreements between the buyer(s) and the AA as well as between the AA and the allied FFs, specifying the goods to be produced in terms of quality, quantity, and delivery, as well as the price determination mechanism; (b) beneficiary co-financing and agreements; (c) the roles and contributions of the parties to the agreement, including those covered under the project and potentially also other government institutions; (d) the subproject, which comprises all the investments required at the FF and AA levels as well as the TA needed to accompany these investments (including institutional strengthening) and to comply with the terms of the marketing agreement; and (e) the technical, financial, and safeguard analyses required to establish feasibility.

7. Subprojects will be formulated on the basis of the product specification agreed with the buyer and include: (a) a description of the activities to be carried out by each one of the participating parties to fulfil their commitments under the marketing agreement; (b) the areas of capacity building both at the FF (individuals and groups) and AA level; (c) a simple procurement plan comprising investments on-farm, at the level of individual FFs or at the group level (if applicable) and for the AA; and (d) subproject sequencing and funding tranches (estimated schedules for funding from different sources).

8. Business plans will be developed through close interaction with prospective buyers. To be eligible for support, business plans must be technically feasible and financially viable, and include a rigorous financial analysis. Business plans should also include a technical description of the subproject, evaluation of market feasibility, an environmental assessment, a list of allied farmers and buyers, and the detailed needs for investments and TA. The list of allied FFs is expected to have a minimum percentage (further defined in the POM) of FFs who are younger than 40 years of age and a minimum percentage that are women.

9. Producer organizations with potential will be encouraged to participate as AAs; however, to give

producer organizations an opportunity to participate as AAs, they will not compete directly with other private sector AAs in the selection process. Weaker producer groups will participate as FFs in alliance with an AA, and they will receive TA in organizational and institutional strengthening to help them become an AA in the future.

10. A matching grant contract ("Subproject Agreement") will be signed between the corresponding PCU/PIU and the AA together with at least ten allied FFs participating in the Plan (it is estimated around 15 FFs on average perf Subproject). Subprojects consist of the portion of the business plan that will be: (a) financed with grants covered from the proceeds of the proposed credit; (b) implemented by the AA and a group of allied smallholders (FFs); (c) governed by the Subproject Agreements signed between the AA, allied FFs, the PCU of MoFE/MoEP, and the PIU of the respective Ministry of Agriculture; and (d) include investments, operational expenses, training and capacity building, as well as TA activities. The "alliances" are rather informal groupings of an AA with FFs through a Memorandum of Understanding for the purpose of preparing a Business Plan. Once a Business Plan is approved, the alliance is formalized by signing the corresponding Subproject Agreement (legally binding contract) between the AA and FFs, together with the PCU and PIU in each country. The "alliances" with the buyers will be based on, at least, a letter of intention, and preferably an agreement or a contract legally binding.

Component 2: Implementation of Business Plans (Grenada: IBRD US$2.2m; IDA US$ 0.22m; beneficiaries: US$ 0.64m; SVG: IDA US$2.95m; beneficiaries: US$ 0.72m)

11. This component will provide matching grants to co-finance the implementation of technically feasible, financially viable, economically profitable, socially responsible, and environmentally sustainable business plans, which when implemented will help to provide a consistent and timely supply of sufficient quantities of quality produce to buyers, while helping to provide a reliable income to allied FFs and AAs. The implementation of these Business Plans will make possible an increase in productivity and improvements in quality of the products, as well as reducing dependency on rainfall, thus reducing the constraints for increasing supply during peak season and enhancing vulnerability to climatic factors. These Plans will be formulated by potential AAs with their allied FFs, buyers, technical service providers, and lenders, with project support provided under Component 1 to ensure consistency in the methodology applied and high quality in the proposals. Business plans will qualify for project support on a competitive basis. They will include activities on both the AA and FF level, as well as investments and operational expenditures, training, TA, and the development of managerial skills. Small and medium-sized AAs (as further defined in the POM) will be eligible for matching grants. The component directly addresses the following two main binding constraints:

(a) **Limited aggregation of smallholder produce and lack of planning and coordination among stakeholders along the various value chains**. This bottleneck would be overcome by developing aggregation schemes and improve their forward linkages (produce markets) and backward linkages (farmers' production, input providers) while assuring compliance with quality and food safety standards. Actors that can assume the required aggregation role may include producer organizations, traders and wholesalers, agro-processors, larger (lead) producers buying products from multiple small FFs, and others. The AAs would link up with smallholder producers ("allied farmers/fishers") represented in an organization or individually.

(b) **Low productivity and limited market integration among aging smallholders whose**

population is decreasing. This bottleneck would be overcome by promoting agricultural commercialization among smallholders and encouraging young people to take up modern farming and linking them to markets through strategic alliances with AAs.

12. **This component will finance:**

(a) The implementation of a matching grant and voucher program, including the provision of:

(i) training for capacity building to AAs receiving matching grants (such as in logistics, storage, marketing, agronomy, accounting, financial literacy, food processing, good manufacturing practices, packaging, labelling, traceability, quality control, food safety and hygiene, legal and environmental aspects) and FFs receiving vouchers (such as in good production practices, modern and improved technologies, climate-smart agriculture, post-harvest handling, and financial literacy); and

(ii) support in supervising the implementation of the selected business plans (such as assisting the PIU to put in place a technical supervision and implementation support system, capable of following up the implementation of the Business Plans making sure it is following the approved Plan and detecting real or potential issues that could compromise the expected results of the Plan or its effectiveness).

(b) Provision of matching grants to eligible AAs, and vouchers to eligible FFs, which are allied with the respective AAs, for the purpose of implementing the business plans selected under Component 1 of the Project, and co-financing investments under said plans, including:

(i) for the selected AAs: (A) equipment (transport, office, ICT tools/mobile applications, cold storage, product processing, and so on), infrastructure (such as storage/warehouse and cold chain facilities) and other related inputs, and (B) technical assistance and specialized Training related to their respective business plans; and

(ii) for the selected FFs: (A) farming equipment, infrastructure and other related inputs (such as equipment for land preparation and harvesting, irrigation infrastructure (including rainwater harvesting structures and pressured irrigation, greenhouses, tunnels, hydroponics, aquaponics, and so on), and (B) fishing equipment, infrastructure and other related inputs (such as boats and fishing implements, logistics, temporary cold storage)

(c) Provision of (i) technical assistance and Training on procurement to AAs receiving Matching Grants, and (ii) specialized Training, in relation to the implementation of the relevant business plans, to FFs receiving Vouchers.

13. The Technical Assistance Agreement to be signed between both countries and FAO to be financed under the Project will include necessary technical support for the implementation of activities described under paragraph 12 (a) above, unless such activities constitute a conflict of interest with the services provided under this assignment.

14. The AAs will procure small works, goods, and individual consulting services and non-consulting

services under a threshold defined in the POM. The procedures, contract forms, and thresholds to be followed by the AAs will be included in the POM, which sets the procurement procedures undertaken under the project. Above the specified threshold and for all consulting services of firms, regardless of the threshold, all procurement for the AAs will be undertaken by the PCUs. In addition, the PCUs will have a fiduciary control function of the procurement undertaken by the AAs as further described in the POM. Specifically, all procurement of works will be subject to PCU's Prior Review due to the risk and liability. Under this proposed mechanism, each AA will receive funds in a specific bank account opened by the beneficiary AA for its exclusive use while implementing the Subproject. The counterpart funds from the AA are expected to be deposited in the same specific account as a precondition for disbursing project funds for the same purpose, which will be sequenced in line with physical progress in accordance with the Subproject Agreement and the related schedule in the Subproject Procurement Plan. Finally, the respective PCUs will provide TA and support to improve the procurement capacity of the AAs. The Technical Assistance provider (at this moment envisaged to be FAO) is not eligible to provide any downstream goods, works or consulting and non-consulting services if such activities constitute a conflict of interest with the services provided under this assignment.

15. In the case of the FFs, the project will build on previous experience under the Grenada Small Farmer Vulnerability Reduction Project and use a voucher mechanism. Investments for FF subprojects will be partially financed through vouchers, issued by the PCU in the name of the beneficiaries (in accordance with the terms of each respective business plan and its corresponding Subproject Agreement). The FFs will use these vouchers to complement their own funds in purchasing specific items, as confirmed and approved by the PCU, from a local supplier identified beforehand from a list of approved suppliers to be prepared by the PCU.

16. Each business plan will need co-financing from the AA (at least 20 percent of the AA investments for producer organizations and at least 50 percent for other private sector AAs). The AA counterpart financing for the business plan will have to come from their own resources or be obtained through other sources (banks, credit unions, development banks, private lenders, etc.). Proof that those resources have been secured in advance from any of these sources would be a precondition for starting to implement a subproject. These AA contributions will be divided into tranches and deposited in the AA's account as a precondition for each of the corresponding disbursements of project funds. The percentages of counterpart financing will vary in accordance with the type of AA (see Tables A1.1 and A1.2 later in this Annex).

The Subproject Cycle

17. The steps to be followed for preparing and implementing business plans and their respective subprojects are described below for each component of the proposed project.

<u>Under Component 1:</u>

(a) **Outreach, promotion and networking**. The PIU will develop and implement a communication and dissemination strategy to increase awareness of the project among prospective beneficiaries and gain their commitment to participate in preparing a proposal, including local, regional, and international buyers, potential AAs and FFs, and lenders. Investor and buyer promotion plans will be carried out, as well as activities targeting stakeholders of potential business plans. The organization of networking events, such as business roundtables and local workshops, will facilitate the formation of these alliances.

(b) **Intensive Training for formation of alliances.** The PIUs will carry out intensive work with the potential alliance partners to present methodologies for elaboration of business profiles and possible preparation of business proposals.

(c) **Call for proposals and formulation of business proposals.** The PIU will officially open a Call for Proposals. Under the lead of the AAs and in close collaboration with the allied FFs, buyers, and lenders, and with support from FAO, the business opportunities that have been identified are translated into business proposals.

(d) **Evaluation and selection of business proposals**. An Evaluation Committee, led by the PIU with support and advice from other government agencies (as well as specialized consultants, as needed), will evaluate business proposals presented by the beneficiaries with the following criteria: (i) compliance with eligibility criteria and safeguards; (ii) adequacy of AA, FFs and buyer; (iii) adequacy of producer's resource endowment; and (iv) commitment by AA to co-financing a substantial percentage of the subproject cost.

(e) **Formulation of business plans**. Partners whose business profiles are approved will receive TA support from FAO to formulate their business plans. FAO will ensure that top-quality experts in accordance with the value chains and products involved are hired to support the teams.

(f) **Evaluation and selection of business plans**. The Evaluation Committee, will perform the technical and financial evaluation of business plans. Safeguards evaluation and inclusion of mitigating measures, if required, will be carried out by the PCU teams. The approved business plans will require a no-objection from the World Bank.

(g) **Signature of subsidiary Subproject Agreement**. For the selected business plans, a subsidiary Subproject Agreement will be signed by the respective PCU, AA, and FFs (either individually or collectively represented by their organization, if applicable).

Under Component 2:

(a) **Verification of availability of AA funds for co-payment.** The AA must demonstrate the availability of funds for the co-financing specified in the business plan and as committed in the Subproject Agreement. If the AA is relying on a loan from a commercial lender, the AA must provide the approval of the loan request by this lender to the PCU. In addition, no voucher will be issued for the allied FFs until the AA demonstrates the availability of those funds.

(b) **Training.** FAO will support the PIU to establish a system for providing training in areas of common interest to all beneficiaries. It would primarily be focused at increase capacity of all participating AAs and FFs in the implementation of their business plans (including technical aspects, financial management and accounting, legal and environmental aspects of their businesses, market analysis and promotion campaigns, certification procedures and export requirements, market logistics, etc.).

(c) **Procurement of investments.** The procurement of small works, goods, and individual consulting services and non-consulting services below a pre-identified threshold defined in the POM may be procured by the AA, following the procedures and contractual documents specified in the POM. The PCU, through consultants, will provide procurement training and implementation support to the AA, if needed. Project funds will be disbursed directly to an operational account opened by the AA, in accordance with the schedule of payments agreed and the Procurement Plan. For each payment, the PCU must receive proof that this account has the counterpart funding required from the AA in order to make the full payment to the provider. The Technical Assistance provider (at this moment envisaged to be FAO) is not eligible to perform any of the assignments that are included or result of the approved Business Plans, as that would constitute a conflict of interest. For investments by FFs, the PCU will issue individual vouchers for FFs to acquire specific products, in accordance with the Subproject Agreement, from a pre-identified list of local suppliers participating in the project.

(d) **Supervision and Implementation Support.** FAO will provide support to the PIU to follow up the implementation of the Subprojects, if those not represent a conflict of interests under the scope of the technical assistance provided under component 1, in order to ensure that (i) all investments and activities are undertaken in accordance with the timetable in the business plans; (ii) FFs and AAs provide the goods to the quality, quantity, and timeliness specifications agreed in the business plans; (iii) that the environmental and social aspects are respected; and that Good Agricultural Practices and Good Manufacturing Practices are used; and (iv) to detect as early as possible real or potential issues that could constrain an efficient implementation and compromise the intended results. The PIUs will coordinate and supervise all activities and ensure that the services of the consultants are of good quality.

Eligibility Criteria

18. **Beneficiary FFs.** To be eligible to apply for financing under a subproject, each prospective beneficiary FF must:

(a) Participate in preparing the subproject proposal and be willing to sign the Subproject Agreement.

(b) Be registered with the Ministry of Agriculture and possess a valid farmer's ID from the ministry;

(c) Own agricultural land or fishing boats and related assets, or be in possession of a long-term lease (5 years or more), especially for assistance with crops.

(d) Can demonstrate to have cultivated or fished for the last three years.

(e) Agree to work together with the extension officers and representatives from the project, and with the consultants appointed by the respective PCU/PIU, to identify the investments and inputs needed as well as the proper use and handling of the inputs.

(f) Be willing to exhibit his/her plot as a demonstration plot, if required.

(g) Be willing to provide information to the relevant parties for M&E as well as for impact assessment.

(h) Keep proper records of the whole farm enterprise.

(i) Be willing to give feedback about the benefits derived from the help received and lessons learned.

(j) Agree not to use banned agro-chemicals on their farms and to adopt the best practices as recommended by the project.

19. **Eligibility of AA**. For an AA to be eligible to participate in the project, the main conditions are the following (a complete detailed list of conditions is to be included in the POM):

(a) Be a registered business or producer association legally established, with taxes paid up to date or legally exempted from tax. Start-ups are also eligible.

(b) Comply with integrated pest management rules/regulations established by the project.

(c) Supply information on usage, storage, protection, disposal, and so on of pesticides and other agro-chemicals.

(d) Sign and adhere to the Subproject Agreement with the respective PCU and PIU.

(e) Commit to work with a group of at least 10 FFs in the business plan.

(f) Agree with an investment amount not exceeding 50 percent of the total investment under the subproject (AA plus FFs).

(g) For AA legally established as private firms (other than producers' organizations), they should comply with the limits currently used in the region for Small and Medium Size Enterprises (SMEs), mainly in terms of number of employees, capital and annual average revenues. These criteria will be specified in detail in the Project Operational Manual (POM) for both countries.

20. **Eligibility of suppliers of goods for FFs**. For a potential supplier to be eligible to participate in the project, it must:

(a) Have an established firm/company already supplying the goods recommended by the project in selected areas, or already having agreements to buy/import them. In order to increase completion among suppliers, the project will facilitate the formalization of informal suppliers for them to participate in the project.

(b) Respond to a call for participation (to be widely announced in the media), present an application to the PCU to be a certified supplier under the project, and commit to comply with all regulations and methodologies.

(c) Offer competitive prices in accordance with the current market situation.

(d) Be up to date with payments of taxes and other legal contributions to the government.

Subproject Financing

21. Since the funds available from the credit proceeds are quite limited, it is imperative to establish maximum limits for the financing of each subproject, thus ensuring the possibility of supporting a relatively wide spectrum of value chains in the country and a substantial number of beneficiaries. The preliminary limits are specified in Tables A1.1 and A1.2.

Table A1.1: Conditions for FF sub-grants—vouchers

FF individual investments under the subproject (US$)	
Maximum percentage of total matching grant (%)	80%
Maximum amount of individual sub-grant (US$)—voucher	8,000
Maximum sub-grant financing for all FF participants in the business plan (in US$)	120,000 (must be no less than 50% of total investment for the subproject)

22. These parameters mean that an allied individual FF beneficiary must provide co-financing for 20 percent of the total cost of the investments. The maximum amount that an individual FF can receive from the proposed project is US$8,000 for an investment of at least US$10,000. The total amount of individual sub-grants to all participating FFs in a single subproject is limited to US$120,000, independent of the number of participating members.

Table A1.2: Conditions for the AA matching grants

AA investment under the subproject (US$)	**Producer organization**	**Small and medium sized AAs**
Maximum percentage of total matching grant (% of total investment)	80%	50%
Maximum amount of individual sub-grant (US$)		
(a) for investments	120,000	120,000
(b) for Technical Assistance	20,000	20,000
(c) Total Sub-grant	140,000	140,000

23. In the case of AAs, even though the maximum amount of the matching grant is the same for all AAs, the proportion of total investment to be covered by the sub-grant will depend on the type of AA. For producer organizations, the project will provide a matching grant of up to 80 percent of the total cost, while for private small and medium-sized AAs, the project will provide a matching grant for up to 50 percent, demanding a greater cofinancing effort from this private enterprise. In cases where the public sector has a share in a producer organization or other type of AAs (e.g., state-owned enterprises), then the project will also provide matching grants up to 50 percent. Larger size AAs (as defined in the POM) will be able to participate in the project as AAs, but they will not be eligible for receiving matching grants (they may work with eligible FFs receiving sub-grants under the project). The maximum matching grant for an AA will be US$120,000, irrespective of the total investment amount.

Component 3: General Agricultural Services and Enabling Environment (Grenada IBRD: US$0.54m; SVG: IDA US$0.25m)

24. The objective of this component is to strengthen general agricultural public services directly linked to the subprojects described in Component 2 and needed to enhance the probability of success. It will also support the strengthening of the overall enabling environment needed for the sustained development of the business enterprises with potential competitive advantages, locally and internationally. Specific activities that the project will finance may include: (a) activities to improve and increase the availability of key inputs required for the adoption of more productive technology (such as quality seeds, seedlings, and planting materials traditionally provided by MoALFF and MoAFFRT to farmers for the products supported in Component 2); (b) organization of trade fairs and study tours, or facilitation of participation in those events; (c) strengthening agricultural public extension service providers' capacity and effectiveness to acquire knowledge and skills to support the effective adoption of technology by agricultural and fisheries beneficiaries and the implementation of their business plans, as well as improvements in information dissemination and communication technologies to reach a broader

audience in the sector; (d) technical studies to generate new knowledge in key aspects of competitiveness, including market studies, analysis of new potential value chains, enabling environment, competition reforms, agro-food logistics, and food safety requirements and quality standards (including legal framework) and related technical skills; and (e) improvements in public infrastructure considered essential for the promotion of adequate internal distribution of produce, reduction of post-harvest losses, establishment of modern food safety mechanisms, as well as cold storage at key exit points for perishable agricultural exports (e.g., at the port or airport terminals). The Caribbean Growth Forum will be a good platform to undertake public-private dialogue for some of these activities.

25. The TA Agreement with FAO will include technical support for the implementation of activities under (iii) described above, if those don't represent a conflict of interests under the scope of the technical assistance provided under Component 1

Component 4: Project Management, Monitoring, and Evaluation (Grenada IBRD: US$0.66m; SVG IDA: US$0.70m)

26. The objective of this component is to ensure effective project implementation, monitoring of activities, and final project evaluation. The project will finance goods, consulting and non-consulting services, training and incremental operational costs to the PCU and the PIU for expenditures related to project activities, including: (a) project coordination and management; (b) monitoring, evaluation, and impact assessment; (c) fiduciary administration, accounting and financial/technical audits; (d) safeguards management; and (e) a citizens' engagement mechanism.

C. Project Cost and Financing

27. The project will be financed by: (a) an IDA US$4.3 million credit to SVG; (b) an IBRD US$2.2 million loan for Grenada; and (c) an IDA US$1.8 million credit to Grenada. When counterpart funding from the beneficiaries is included (estimated at around $1.36 million), the total cost of the project is estimated at around US$9.66 million.

D. Lessons Learned and Reflected in Project Design

28. **Lessons learned from the Grenada Small Farmers Vulnerability Reduction Project (P124107, implemented 2010–13).** Experience with the Vulnerability Reduction Project contributed directly to the design of the voucher system to be implemented under the proposed project. The Vulnerability Reduction Project provided incentives in the form of vouchers enabling small farmers to adopt improved agricultural inputs, water management technology, and improved livestock practices to cope with the global financial and food crisis and weather fluctuations. The voucher system transferred all procurement transactions directly to farmers and private input suppliers and technology providers. It reduced administrative costs and market distortions, and it empowered farmers to make their own decisions about which inputs and technologies to buy and where to buy them (ultimately 23 input suppliers participated).

29. **Findings and recommendation from recent analytical work on developing linkages between producers, processors, and the tourism industry.** A regional World Bank study, "Linking Farmers and Agro-processors to the Tourism Industry in the Eastern Caribbean" (Jansen, Stern, and Weiss 2015) provided recommendations relevant to the design of the proposed project, of which the most important are:

- A combined production-marketing system, led by the private sector, is a promising model to address the fundamental marketing issue of limited aggregation of produce by smallholders.

- A matching grant mechanism could facilitate aggregation schemes and contract farming arrangements by financing competitively selected and financially viable business plans to develop them, covering the needs of aggregators and producers.
- Enabling young entrepreneurial farmers to establish their own innovative farming enterprises would revitalize OECS agriculture, enabling it to move away from subsistence farming and a focus on traditional exports and become an increasingly diversified, dynamic, and commercial sector with improved linkages to the tourism sector and the local economy.
- Create alliances for agro-processors with farmers or farmer groups, commercial partners, technical service providers, or financial intermediaries.

30. **Lessons from similar projects in the region that use the PA approach.** A major conclusion emerging from a recently published study "Linking Farmers to Markets through Productive Alliances: An Assessment of the World Bank Experience in Latin America" (World Bank 2016) is that the approach can be a cost-efficient way to boost productivity, expand production, improve competitiveness, and link farmers to markets. Completed PA projects have shown satisfactory financial rates of return and largely achieved their objectives. The PA approach is flexible and can be adapted to many different target groups, value chains, and production environments. PA has been an effective tool not only for targeting established producer groups and value chains but for fostering the inclusion of disadvantaged groups in markets. The main lessons have been:

- Keep ground-breaking operations with new borrowers simple; use piloting and evaluation for scaling up.
- It is critical to set realistic outcomes aligned with project activities and investments. Overambitious project targets can reduce the likelihood of success.
- Identify and prioritize promising value chains during project preparation based on a realistic assessment of the local/regional comparative advantage in specific value chains.
- Beneficiary targeting and selection must consider producers' existing endowments and assess their ability to comply with market requirements.
- A competitive subproject selection process based on clearly defined technical evaluation criteria is crucial for establishing credibility among stakeholders and avoiding political interference.
- Requiring cash contributions or commercial bank loans as co-financing from producers will ensure stronger buy-in.
- Instead of providing a one-off injection of resources, projects should accompany beneficiary producer organizations (and buyers) while implementing their PA subproject.

31. **Conclusions from another recent study on matching-grants.** Some of the main recommendations of the study "Experience with Matching Grants" (Coste and Hristova 2016) are in line with the proposed project. For example, the recommendations emphasize the importance of TA; correct identification of the market failure that the matching grant aims to remove; the non-sustainable impact (if the project fails to address binding constraints, such as access to credit); the right definition of the economic rationale; and the establishment and use of a robust M&E system.

ANNEX 2: IMPLEMENTATION ARRANGEMENTS

COUNTRY : OECS Countries
Agriculture Competitiveness Project

1. Project Institutional and Implementation Arrangements

1. **Overall Implementation Responsibility.** In each country, representatives of the government and the private sector will form a Steering Committee (SC) to provide overall guidance and support for project implementation, as well as to assure proper inter-institutional coordination. This Committee will approve the annual Project Operating Plans and the requests for budgetary allocations, and it will provide opinions on the general strategy of the project and its consistency with government's plans and priorities. In each country, this Steering Committee will be formed by representatives appointed by ministries and agencies considered relevant for the implementation of the project and the achievement of its intended objectives. The constitution of this SC will be defined in the POM. However, it is envisaged that, in principle, the main members could be the following:

(a) **Grenada:**

- (i) Ministry of Finance and Energy (MoFE), as Head of the Steering Committee;
- (ii) Ministry of Agriculture, Lands, Forestry and Fisheries (MoALFF), as Vice-Head of the Committee;
- (iii) Ministry of Economic Development, Planning and Trade;
- (iv) Chamber of Commerce;
- (v) Bureau of Standards; and
- (vi) Representatives of the private sector (producers' organizations and/or private agribusiness associations).

(b) **St. Vincent and the Grenadines**:

- (i) Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour (MoEP), as Head of the Steering Committee;
- (ii) Ministry of Agriculture, Forestry, Fisheries and Rural Transformation (MoAFFRT), as Vice-Head of the Committee;
- (iii) Ministry of Health and Environment;
- (iv) Ministry of Tourism and Industry;
- (v) Bureau of Standards;
- (vi) Chamber of Industry and Commerce; and
- (vii) Representatives of the private sector (producers' organizations and/or private agribusiness associations).

2. **Overall fiduciary and safeguards responsibility for the project will rest with the existing PCU in**

each country. In Grenada, this PCU is located in the Ministry of Finance and Energy (MOFE). In SVG, the PCU is the existing Public Sector Investment Program Management Unit (PSIPMU), located in the Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour (MoEP). Both have executed Bank-financed operations for several years, but their capacity is limited. Fiduciary and safeguards assessments of the PCUs were completed at appraisal. The need for further strengthening under the project will be assessed continuously (even throughout implementation), to be provided either through the provision of additional staff or consultants to efficiently implement the fiduciary and safeguard aspects of the proposed project.

3. **Overall technical implementation responsibility would rest within the line ministries of agriculture (MoALFF in Grenada; MoAFFRT in SVG), through a small PIU in each country.** In principle, each of these PIUs will consist of at least a Project Manager and an Agribusiness Monitoring and Evaluation Specialist. The PIU will be responsible for (a) coordinating and implementing all Project activities, including with relevant agencies and beneficiaries, as specified in the Project Operations Manual ("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, and (d) monitoring and evaluating the Project. Very close collaboration between the PIU and the PCU will be crucial.

4. **Evaluation Committee.** This Committee with be responsible for: (a) reviewing and approving the Business Proposals to be transformed to Business Plans; and (b) assessing and approving the final Business Plans to be implemented. It is envisaged (in principle) that it will be comprised by: (a) the Director of Planning in MoEP in SVG or the Coordinator of the PCU in MoFE in Grenada; (b) the General Coordinator of the PIU in the respective ministries of agriculture; (c) members appointed by major representative organizations of beneficiaries (association of farmers or fishers); and (d) private consultants of delegates from reputable technical universities or institutes in the country with broad knowledge in the production and marketing sectors. The final constitution and working arrangements of this Committee will be detailed in the POM.

5. **Technical Assistance (TA).** The main focus of the assistance is to provide support to the preparation and implementation of effective and sustainable business plans at the FF and AA levels and to strengthen the public extension services of the Ministry of Agriculture. The TA together with the investments included in the business plans are the two main pillars of the project complementing each other to achieve the development objective. The Borrowers, through each PCU, will enter a contractual agreement with a technical service provider to receive specific assistance and guidance in key aspects of project implementation. The two Governments have proposed the option of engaging the Food and Agriculture Organization (FAO) of the United Nations as the main technical service provider, given its long engagement with both countries and its presence in the region, as well as its worldwide experience with the agricultural sector. Some of the main areas of assistance will be:

(a) **General training for the elaboration of Business Proposals and TA to support AAs and FFs with the preparation of detailed Business Plans.** More specifically, FAO would: (i) provide general training on how to elaborate business proposals to all the stakeholders involved; and (ii) for those with selected Business Proposals, support aggregators and agro-processors, their allied farmers and fishers, as well as buyers in the preparation of their respective Business Plans. This business line would fall under Component 1 of the Project.

(b) **General training to all selected FFs and AAs.** FAO would provide general training to all FFs and AAs participating in approved Business Plans, such as good agricultural practices, financial literacy, basic marketing and logistics, food quality and safety, certification requirements for local/foreign markets, administration and management, accounting and finances, manufacturing processes, etc., unless those assignments constitute a conflict of interests with the scope provided by FAO under Component 1. This business line would fall under Component 2 of the Project.

(c) **General Supervision of the implementation of approved Business Plans.** FAO would provide assistance to the PIUs to establish a system to follow up and support all the AAs and FFs to ensure the approved Business Plans are implemented correctly and effectively and that it could identify issues that may constraint the achievement of the intended results (unless those assignments constitute a conflict of interests with the scope provided by FAO under component 1). This business line would also fall under Component 2 of the Project.

(d) **Strengthening public extension services of the Ministry of Agriculture.** FAO would provide assistance for strengthening the public agricultural extension services of MoALFF (Grenada) and MoAFFRT (SVG), mainly through: (i) providing training to public sector staff in modern agricultural production technologies and introduction of climate smart measures; and (ii) working together with the field extension agents providing hands-on training to provide TA to the FFs and AAs participating in the Business Plans supported under the proposed Project. This business line would fall under Component 3 of the Project.

2. Financial Management

Grenada -- Financial Management Assessment

6. **Risk Assessment.** The overall FM risk rating assigned to this project managed by the Grenada PCU (MoFE) is Moderate. The matching grant operation is complex in nature, however, the PCU's FM system is good and should be able to handle this operation effectively with guidance from the Bank. The FM Specialist (FMS) will monitor the project FM risk during implementation.

7. **Staffing**. A Finance Officer (FO) in the PCU will be dedicated to this project. The FM staff of the PCU possesses good technical knowledge and have several years of experience working on World Bank–financed projects. The Bank's FM team will continue to provide training on Bank's policies and guidelines to the PCU FM staff.

8. **Financial Accounting.** The accounting of the project will be performed by the finance unit of the PCU in MOFE and will be consistent with the current accounting procedures and processes applicable to all other World Bank projects implemented by the PCU. The accounting records for the project will be maintained in the Quick Books v2012 accounting system until all issues have been resolved with the Government of Grenada's SmartStream IFMIS. At that time, the project will be transferred and accounted for in Smartstream. The current POM is very comprehensive and the processes and procedures will be adequate to ensure that the financial information is accurate and funds are only utilized for project purposes. The POM should be updated to reflect the specific context of this project, especially as it relates to the procedures covering the matching grants.

9. **Budgeting.** A budget for all the activities of the project for the entire implementation period will be prepared at the beginning of the project by the technical team at MoALFF, the PCU, and the Bank. The budget will be revised each fiscal year and on an ad hoc basis based on implementation progress. The annual work plan will be derived from this master budget. The project's annual approved budget should be included in the Government of Grenada's Annual Estimates under the MoALFF line ministry.

10. **Reporting.** Interim Financial Reports (IFRs) are required each calendar quarter and should be submitted to the Bank within 45 days of the end of each calendar quarter. Annual external audited project financial statements are required, with each audit covering one fiscal year (ending December 31). The audit reports are due to the Bank no later than six months after the end of each audit period.

Saint Vincent & the Grenadines -- Financial Management Assessment

11. **Risk Assessment.** The overall FM risk rating assigned to this project managed by the PCU (in MoEP) is Moderate. The matching grant operation is complex in nature, however, the PCU's FM system is fairly good and should be able to handle this operation effectively with guidance from the Bank. The PCU is an existing implementing agency and has FM arrangements in place. The FMS will monitor the project FM risk during implementation.

12. **Staffing.** The PCU has assigned an FM officer from the finance unit within the PCU who will be dedicated for this project. The World Bank FM team will provide hands on training on Bank's policies and guidelines to the respective FM staff.

13. **Accounting.** The accounting of the project will be performed by the finance unit within the PCU and will be consistent with the current accounting procedures and processes applicable to all other World Bank projects implemented by the PCU. The accounting records for the project will be maintained in the Peachtree v2012 accounting system and the government's IFMIS will be updated with the project's transactions for the month via a monthly journal entry. The current Finance Procedures in the Operations Manual is very comprehensive, and the processes and procedures once applied consistently are adequate to ensure that the financial information is accurate and funds are only utilized for project purposes. The Finance Procedures should be updated to reflect the specific context of this project, especially as it relates to the procedures covering the matching grants.

14. **Budgeting.** A budget for all the activities of the project for the entire implementation period will be prepared at the beginning of the project by the technical team at MoAFFRT, the PCU, and the Bank. The budget will be revised quarterly and on an ad hoc basis based on implementation progress. The annual work plan will be derived from this master budget. The project's annual approved budget should be included in the Government of St. Vincent and the Grenadines Annual Estimates under the MoALFFRT line ministry.

15. **Reporting.** IFRs are required quarterly and should be submitted to the Bank within 45 days after the end of each calendar quarter. Annual external audited project financial statements are required with each audit covering one fiscal year (ending December 31). The audit reports are due to the Bank no later than six months after the end of each audit period.

Supervision Plan

16. The supervision strategy for this project is based on its FM risk rating, which will be evaluated on a regular basis by the FMS and in consultation with the relevant Task Team Leader.

3. Flow of Funds (both countries)

17. The project will be disbursed based on Interim Financial Reports (IFRs) adjusted to the requirements of the project. The flow of funds presented below have been discussed with both countries and are the preferred options as expressed by the governments. The funds flow arrangements are incorporated in the POM of the respective countries with detailed guidance on the validation of expense process, as well as any supporting documents required. For all amounts not paid to a supplier directly by the PCU (i.e., direct payments by beneficiaries using matching grants), the beneficiary must provide the original supporting documents on a regular basis (to be agreed on by the PCU and the beneficiary) that will facilitate the PCU reporting to the World Bank in a timely manner as per the requirements of the legal agreement. No financial management (accounting or financial reporting) of the project activities will be undertaken by the beneficiaries, as the financial management of the full project is a function that remains with the PCU. The flow of funds will be as follows:

(a) **Flow of Funds** (for all transactions). The borrowers will open an US$ Designated Account (DA) and a local currency (ECD) bank account upon effectiveness of the project, which will have to be maintained exclusively for the project during its implementation. The selected banking institutions are the Grenada Cooperative Bank and Bank of St. Vincent and the Grenadines, respectively. Bank proceeds from the credit and loan accounts will be disbursed into the US$ Designated Account. The US$ Designated Accounts will be used to receive funds directly from the World Bank as well as to make US$ payments. Funds may be transferred from the US$ DA to the local currency (ECD) bank account to facilitate local currency payments based on periodic cash forecasts based on scheduled project activities. The Designated Accounts will be segregated for SVG and pooled for Grenada. They should be used only to facilitate payments for eligible items that relate to the project's activities and corresponding to eligible works, goods and services.

(b) **Matching grants.** The same bank accounts (DAs) mentioned above will be used for all payments. The procedures for the funds flow to be followed for AAs and FFs are as follows:

(i) **For AAs,** undertaking their own procurement under a threshold defined in the POM, the disbursement mechanism for AA's would operate as follows: Once the proposed Business Plan is approved, a Subproject Agreement will be signed between the PCU/PIU and each beneficiary under the alliance (AA and FFs), where the matching grants and the counterpart contributions by beneficiaries will be defined. The corresponding Procurement Plan for the investments to be procured by the AA will also be included in the Subproject Agreement. The AA must open a bank account for the sole purpose of the implementation of its Subproject and place its counterpart contribution to the implementation cost in that bank account (at least the portion related to the first tranche or payment to be made) before a contract is signed with a particular supplier/service provider and before any transfers of World Bank funds are made to that particular bank account. Once the availability of funds in the account is confirmed, the Bank funds will be transferred to each AA's bank account in tranches, based on the contracts signed (and with the corresponding Procurement Plan) and funds deposited by the beneficiary. For each subsequent payment to be made by the AA to a supplier or service provider (already reviewed and approved), AA's would submit documentation on the use of the previous tranche, and based on the documentation provided of the use of funds, together with physical progress, the corresponding matching grant (percentage of payment to be made) would be disbursed upon verification of the availability of the counterpart funding. Payments will thus be made on a lump-sum basis. The PCU should be capable to monitor individually, by each AA, the funds advanced, its purpose and status of project implementation. All sub-project activities would also need to be completed prior to the Closing Date. With the funding made on a lump-sum basis as described in the paragraphs above, the World Bank accounts for the eligible expenditures (i.e. records that the eligible expenditures are documented) when the lump-sum is paid, considering there are mechanisms in place adopted by the PCU for the implementation of the Subprojects, as further established in POM, and the oversight by the Bank that the sub-projects are being implemented as intended.

(ii) **For AAs,** for which the procurement is undertaken by the PCU above a threshold defined in the POM, the procedure will be similar to the one previously presented. The beneficiary AA will open its bank account for the exclusive use under the project and deposit its counterpart contribution to the implementation costs of the Subproject. Since the PCU will be signing the contract with the supplier or service provider, it will be specified in this contract how the payments are going to be made, most probably two parallel payments from the PCU and the AA simultaneously (for each payment or tranche under the contract). Once the availability of counterpart funds is confirmed in the AA's account, the PCU will proceed with its payment and instruct the AA to do the same. The supplier/service provider should reconfirm when the two payments are made, providing adequate documentation as defined by the PCU.

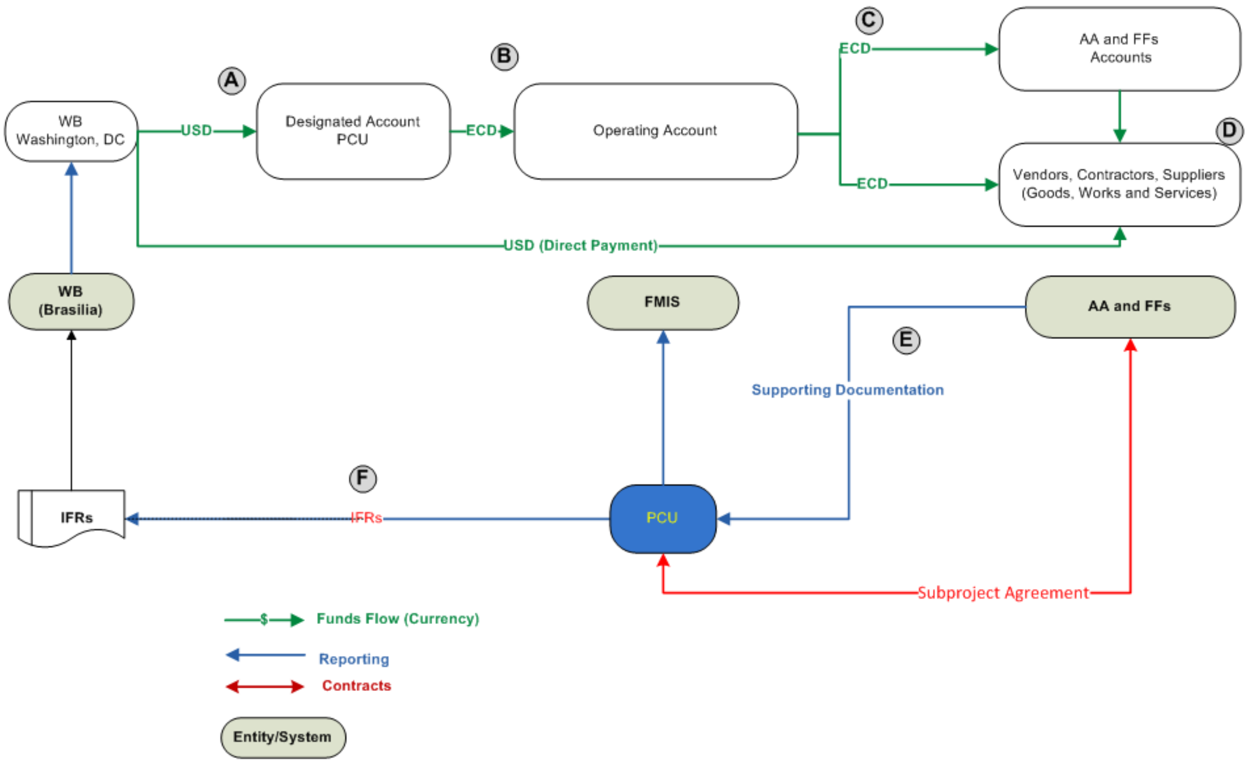
(iii) **For FFs.** The approved Business Plan and the corresponding Subproject Agreement will include details on the investments to be financed for the participating FFs, including the contribution from the Bank funds as well as the counterpart funds. The flow of funds will be done via a 'Voucher' process, based on the positive experience under the previous Grenada Small Farmers Project, financed by the World Bank. The PCU will have a list of approved suppliers from which the farmers/fishers will be able to buy financeable items using the vouchers given to them by the PCU. The full process will be as follows:

A. **List of Suppliers** – The PCU will pre-approve a list of suppliers (which will be disseminated to stakeholders) who will agree to accept PCU approved Vouchers as a form of payment from the farmers/fishers. The PCU will have an agreement with the suppliers that will indicate:

- The items that are financeable by the project;
- The voucher process: FFs should pay their portion of the invoice cost along with presentation of the voucher before delivery of items. The Supplier should submit to the PCU the voucher/s presented by a farmer/fisher along with the invoice and the statement of account (this should show the (a) total cost, (b) amount already paid by the farmer/fisher, (c) balance to be paid and (d) items purchased and delivered. The PCU will pay to the supplier the balance (which should be the portion covered by the project funds) after verifying the documents received from the supplier.

B. **Voucher Process** – The farmer/fisher will get a quotation for financeable items from some of the suppliers in the approved list. They will present their selection of the preferred supplier/s to the PCU based on the quotations received. The PCU will then give the FF a signed pre-numbered Voucher in their (the farmer's/fisher's) name, which should be presented to the approved supplier selected. The supplier should collect the counterpart payment from the FF and deliver the goods. The process for submitting adequate documentation, as mentioned above, should then be followed. Vouchers must be pre-numbered and properly authorized (signed and stamped) by the PCU before given to the FF in order to prevent any deliberate duplication of vouchers –eliminates multiple use of a voucher or duplicated payments for the same items.

Diagram 1: Summary of Flows of Funds under the Project



4. Disbursements

18. Disbursements under the Project would be in the form of Advances, Direct Payments and Reimbursements. Funds can be transferred directly from the Bank to vendors if the direct payment method of disbursement is chosen by any PCU for particular purchases above the minimum value of application (as specified in the Disbursement Letter). Advances should be the primary method of disbursement. Following the current practice adopted by the PCUs, disbursements will be report-based. Each Borrower will open a US$ Designated Account (DA) and be responsible for converting the US dollar to EC dollars, if the payment request local currency. An advance equivalent to six months' forecast will be provided to the DA and subsequently quarterly IFRs will be the basis of documentation of the expenditures on the use of the advances and for reimbursement requests. Subsequent IFRs will also provide a forecast for the following six months, the basis for new advances to be disbursed. The IFRs will include specific Subprojects monitoring report on the use of amounts disbursed under the Matching Grant for the Subproject. The Bank loan would disburse against eligible expenditures (taxes inclusive) as in the table below.

Table A3.1. Eligible Expenditures and Disbursement Categories (Financing Agreements)

GRENADA

Category	Amount of the Credit Allocated (expressed in USD)	Amount of the Loan Allocated (expressed in USD)	Percentage of Expenditures to be financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consulting services, Training and Operating Costs, except Matching Grants and Vouchers under Part 2 (b) of the Project	0	1,795,500	100%
(2) Goods, works, non-consulting services, consulting services, and Training financed by the Matching Grants under Part 2 (b) (i) of the Project	1,100,000	0	100% of the Matching Grants
(3) Goods financed by the Vouchers under Part 2 (b) (ii) of the Project	1,100,000	0	100% of the Vouchers
(4) Front-end Fee	0	4,500	Amount payable pursuant to Section 2.03 of this Loan Agreement in accordance with Section 2.07 (b) of the respective General Conditions
(5) Interest Rate Cap or Interest Rate Collar premium	0		Amount due pursuant to Section 2.08 (c) of this Loan Agreement
TOTAL AMOUNT	**2,200,000**	**1,800,000**	

ST. VINCENT & THE GRENADINES

Category	Amount of the Credit Allocated (expressed in USD)	Percentage of Expenditures to be financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consulting services, Training and Operating Costs, except Matching Grants and Vouchers under Part 2 (b) of the Project	1,500,000	100%
(2) Goods, works, non-consulting services, consulting services, and Training financed by the Matching Grants under Part 2 (b) (i) of the Project	1,400,000	100% of the Matching Grants
(3) Goods financed by the Vouchers under Part 2 (b) (ii) of the Project	1,400,000	100% of the Vouchers
TOTAL AMOUNT	**4,300,000**	

5. Procurement

Procurement Capacity

19. **Grenada**. As noted, this PCU is located in MOFE and was established in 2000 to support a previous World Bank–funded project. Since then, the PCU has handled all fiduciary aspects of Bank-funded projects in Grenada. The PCU is led by a professional with long experience in the public sector. Currently the PCU staff members performing functions related to procurement include:

(a) Project Coordinator: A seasoned professional with more than 32 years of experience, and more than 10 years working with the PCU. She was appointed Project Coordinator in 2010 (and was acting coordinator since 2009).
(b) Procurement Officer: A seasoned professional with more than 10 years at the PCU working in Bank-funded projects.
(c) Procurement Assistant: 6 years of experience.
(d) Accountant Clerk and Office Operations Clerk (responsible for procurement records).

20. **St. Vincent & the Grenadines.** The fiduciary aspects of the project will be handled by the PSIPMU of MoEP, which was set up to oversee the implementation of major projects in SVG. The PSIPMU has considerable experience in the fiduciary aspects of Bank-funded projects and experience and knowledge of its procurement procedures and policies. The PSIPMU Procurement Staff includes:

(a) Procurement Officer 1: A permanent member of the Ministry of Planning staff. She has been part of the PCU since 2012 working on Bank-funded projects.

(b) Engineer: A permanent member of the Ministry of Planning staff who has been part of the PCU since 2005, working with Bank-funded projects.

(c) Two Procurement Assistants: One has been with the PCU for 4 years, and other for 2 years. Both have experience in Bank-funded projects.

21. **Conclusion.** In each country, the respective PCU will be responsible for procurement under the project. The need to hire additional procurement staff to increase procurement capacity at the PCUs is not envisaged at present. The situation should be monitored and the need assessed continuously, given the expected increase of procurement work to be undertaken by the PCUs in the future, and the commencement of several new Bank-funded projects to be handled by those units.

Early Adopter of the New Procurement Policy

22. The proposed OECS Regional Agriculture Competitiveness Project was previously identified as an Early Adopter (EA) of the new procurement policy and regulations, which will apply to all projects with Concept Note dated on or after July 1, 2016. The PPSD methodology is used to determine the optimum procurement approach to deliver the right procurement result.

23. The PPSD asks the Borrower to consider, among other things, the market situation, the operational context, previous experience, and the risks present. Based on that assessment, the next step is to determine the right procurement approach that will yield the right type of response from the market. By designing the right procurement approach, it is far more likely that the right bidders will participate, better bids will be received, and the overall chance of achieving value for money will increase. Therefore, determining the right procurement approach, informed by appropriate analysis, is a critical activity that affects every subsequent step of the procurement process, into project implementation.

24. The PPSD has been prepared by the Borrower as part of the preparation process as it is supposed to be done for all projects financed through Investment Project Financing, and it must be completed, reviewed, and agreed with the Bank before the completion of negotiations. The agreed outputs from the PPSD are summarized by the Bank and included in the Bank's Project Appraisal Document, which is used to determine whether the Bank will finance—therefore the PPSD is of critical importance. In addition, the Procurement Plan is also informed by the PPSD, and subject to the Bank's no objection.

25. For this project, the two existing PCUs (one in Grenada and one in SVG) will undertake the overall fiduciary role. Because only one PPSD is required for the project, close coordination between both countries has been critical for the preparation of the PPSD. In order to support the PCUs in the preparation of the PPSD, a procurement consultant with experience in the preparation and quality assurance of the PPSD's, was engaged. The consultant has provided support and guidance to both PCU's on the preparation of the PPSD and has assisted on the integration of both county inputs into one sole document.

26. Therefore, a single PPSD has been prepared describing the procurement strategy for the project in both countries. A procurement strategy has been developed and agreed based on the findings of the PPSD. The procurement consultant has also provided assistance in the process of finalizing the document incorporating all inputs into one sole concise document, acceptable to both countries and to the Bank. A revised version of the PPSD was completed at appraisal (February 20, 2017) in agreement with both governments and based on the findings.

27. As part of the preparation process, a Client Capability and Internal Capacity Assessment was also conducted to examine the capacity of the PCUs that will implement the procurement activities and the overall project. The main conclusion of this assessment was that although the PCUs are well staffed with procurement personnel who have experience in Bank-funded projects, external help and expertise was necessary to prepare the PPSD as required under the new procurement framework.

28. The Borrower developed a Procurement Plan (acceptable to the Bank) for project implementation which provides the basis for the procurement methods based on the conclusions of the PPSD, which is available (as required for all projects subject to the New Regulations for IPF Borrowers) in STEP (Systematic Tracking of Exchanges in Procurement) . The Procurement Plan will be updated in agreement with the Project Team annually or sooner, as required, to reflect the actual project implementation needs.

29. **Frequency of Procurement Supervision -** Supervision of procurement for this project is based on its Procurement risk rating, which will be evaluated on a regular basis by the Procurement Accredited Staff (PAS) assigned to this project and in consultation with the Task Team Leader and will include supervision missions at least twice a year.

Proposed Procurement Methods

30. The PCUs (through their Procurement Teams) will be responsible for all procurement activities under the proposed project. They will be directly responsible for procurement related to all works, goods, and consulting and non-consulting services. The PPSD, which served as the basis for the Procurement Plan, included a strategic assessment of the operating context and beneficiaries' capabilities, as well as an understanding of the market, the different stakeholders and the risks potentially affecting procurement processes. The PPSD also assessed the various options to select the preferred procurement strategy. The lessons learned from similar projects implemented previously has also been considered in the evaluation of options.

31. Regarding the expenditures under the subprojects, the PPSD has concluded the convenience of having the procurement of the small works, goods, and consulting and non-consulting services involved being carried out by the beneficiary AAs, in accordance with agreed procedures and contractual documents that will be specified in the POM and in accordance with the Bank's Procurement Regulations.

32. Although the project considers these procurement activities to be undertaken by the beneficiaries as part of their institutional and managerial strengthening process, it was identified that no acceptable commercial practices and procurement procedures are currently in place, on the pre-identified possible

beneficiaries. Therefore, an optimal solution that balances fiduciary risk and the need to develop procurement capacity within the beneficiaries is being proposed, based on the conclusions reached under the PPSD, as well as the finalization of the FM assessment (which are interlinked).

33. In principle, the strategy that is proposed for the procurement under the Project, includes the following features:

(a) Procurement under the implementation of the Business Plans.

(i) **Procurement for the investments benefitting the AA**. As stated in the PPSD, the proposed procedures include that the procurement could be undertaken by the AA for small works, goods, individual consulting services and non-consulting services, under a threshold defined in the POM. Furthermore, the procedures, contract forms and thresholds to be followed by the AA's, will be included on the POM, which sets the rules for the procurement undertaken by the AA's. Above this specified threshold, all procurement for the AA will be undertaken by the PCU. In addition, the PCU will have a fiduciary control function of the procurement undertaken by the AA's as further described on the OM. The Technical Assistance provider (at this moment envisaged to be FAO) is not eligible to provide any downstream goods, works or consulting and non-consulting services if such activities constitute a conflict of interest with the services provided under this assignment.

(ii) **Procurement for the investments benefitting the FF**. These investments will be partially finance by the issuing of "vouchers" by the PCU in the name of the beneficiaries (in accordance with the terms of the Business Plans and the Subproject Agreement for that Plan). The FFs will use these vouchers as form of payment for a specific item, which needs to be confirmed and approved by the PCU, and will then use the voucher to purchase the specific approved items from a local pre-identified supplier (as per a list of approved suppliers to be prepared by the PCU) by complementing the finance by their own funds.

(b) **Procurement for the rest of the eligible activities under the Project.** In case of all other activities under all Project's components, the procurement will be undertaken by the PCU, including works, goods and consulting and non-consulting services following the World Bank Procurement Regulations for IPF Borrowers.

Summary Procurement Strategy.

34. **Component 1.** The Borrowers will engage FAO (UN Specialized Agency) with separate agreements for each of the two countries to carry out a comprehensive technical assistance program under this project (components 1, 2 and 3). Any downstream goods, works or consulting and non-consulting services will be excluded from this contract if such activities constitute a conflict of interest with the services provided under this assignment.

35. **Component 2.** Part of the technical assistance services required for component 2 will also be provided by FAO, unless they relate to downstream assignments and for all those that may constitute a conflict of interests. Other TA will be provided by private individuals, either recruited by the PCU or directly by the beneficiaries, as well as firms recruited by the PCU. The PPSD may have to be updated based on the identification of requirements during implementation.

36. **Component 2. -- For sub-projects identified in the Business Plans for AAs**. The procurement of goods, non-consulting services and works below a threshold defined in the POM can be undertaken by the selected beneficiary AAs based on procedures and contractual documents described and included on the Operations Manual. The selection of individual consultants below the threshold can be undertaken by the beneficiaries based on procedures and contractual documents described and included on the Operations Manual. However, all procurements above the threshold and procurement of consulting firms shall be undertaken by the PCU. In cases of Direct Contracting, Single Source Selection, and procurement of works, regardless of the contracted value, will be subject to prior review by the PCU.

37. The procurement plan for each selected business plan has to be presented and review by the PCU. Each procurement plan will be part of the whole business plan documentation and will identify those procurements that are subject to prior review by the PCU or executed directly by the PCU. A sample of contracts, based on metrics described on the Operations Manual, will be subject to Post Review.

38. **Component 2. For the sub-projects identified in the Business Plans for FFs.** The strategy for these procurements is to follow a "voucher" mechanism, being $8,000 the maximum value of each voucher for an individual FF. The PCU agrees the terms and conditions for the required supplies financed by the project with a number of qualified suppliers. The FF present the vouchers to the selected supplier, pay their share of the cost and receive the item. The supplier should inform the PCU accordingly and submit to them the corresponding statement of account for verification and/or balance.

39. **Component 3.** Technical assistance services required for strengthening the ministries of agriculture's extension services will be provided by FAO, unless they relate to downstream assignments and for all those that may constitute a conflict of interests. For the rest of the relevant investments/services not identified yet, the PPSD will be updated. Other TA services will be recruited by the PCUs.

40. **Component 4** This activity will cover mainly the selection of individual consultants, to be undertaken by the PCU, with the objective of strengthening or establishing the respective PCUs and PIUs.

41. The overall Procurement risk rating is Substantial, based on the assessment of the capacity, considerations and complexity of the procurement arrangements reviewed and exposed herein. Although both PCU's have prior experience in implementing World Bank financed projects, this Project is one of the first implemented by both PCU's subject to the new Procurement Regulations for IPF Borrowers and therefore close support and guidance from the Bank will be needed. The Procurement Accredited Staff (PAS) assigned to this project, will monitor the procurement risk during implementation and will support, train and guide the borrower's procurement team assigned to the project.

3. Environmental and Social

Social

42. The proposed project approach, based on the PA methodology, adapted to the OECS context, and reflecting lessons learned in similar projects, seeks to improve the access of small farmers and fishers (FFs) to markets and increase their productivity and income. Business plans will allow them to upgrade their production, capacities, and skills. The project's activities are defined to ensure access and opportunities to vulnerable beneficiaries, and capacity building is tailored to the demands and interests of small producers, different age groups, and women. The potential negative impacts of the project are expected to be moderate, and the relevant instruments have been prepared to address them (mainly regarding land, participation, and consultation).

43. The Environmental and Social Management Framework (ESMF) provides guidelines for screening business plans and subproject sites and for undertaking full social assessments, if needed, to analyze social impacts and risks, including but not limited to land acquisition/resettlement/economic displacement. Social assessments identify population density, patterns of land ownership, and defines the establishment of mechanisms to screen for farm and rural larceny; determines the presence of vulnerable segments of the population in the project area, including women, poorest smallholders, as well as young farmers under the age of 40, to ensure their participation and share in project benefits (including in training and extensions services). A gender plan prepared guides the approach and activities for assuring women's benefits.

44. The sub-projects of agricultural subsectors will be both demand-driven and competitive, and those to be financed will be identified during implementation. Because the proposed project's investments trigger OP 4.12, a regional Resettlement Policy Framework (RPF) has been developed for Grenada and SVG. No project funds will be used for land acquisitions. In case land acquisition is needed, it would have to be entirely and directly financed by the concerned beneficiaries. Activities that could involve involuntary resettlement will be avoided, nevertheless a RPF has been elaborated as a precautionary measure. The RPF defines the resettlement principles, organizational arrangements and the design criteria for individual subprojects to be prepared during project implementation.

45. A project-level Grievance Redress Mechanism has also been developed by the Social Specialists at the PCUs to provide a way for project affected people and communities, as well as members of the public to lodge complaints and/or request information about the Project. The PCUs will monitor and present quarterly reports to the Bank, including: Number of complaints registered; categorization of complaints received; and percentage of complaints solved, and a Grievance Redress Mechanism indicator for the project will be percentage of complaints solved. Once subprojects' sites are known, the social specialists will undertake community consultations to provide beneficiaries and stakeholder communities with information about the subproject and to elicit feedback on subproject activities and design. These consultations will occur during at least three critical points in the life of the subproject: (a) preparation, (b) implementation, and (c) following the completion of activities at subproject sites. The data collected during these two-way citizen engagement activities will be the basis for citizen engagement/beneficiary feedback for individual sub-projects.

Environment

46. The PCUs will be responsible for environmental safeguards. World Bank Safeguard Policy OP 4.01 for Environmental Assessment (EA) is triggered. An analysis of the project and its components was determined that it falls under Category B, due to minor to moderate potential negative impacts from agricultural production, food processing, aquaculture, livestock rearing, and related activities. Given that the details of individual subprojects are not yet known, an ESMF was prepared for both countries. Separate consultations/workshops were held in each country and comments were incorporated in the ESMF. The ESMF was disclosed in-country and on the World Banks external website.

47. The ESMF includes guidance for screening simple projects (such as washing and sorting facilities) that can use standard mitigation measures already detailed in the ESMF, as well as identification of more complex projects (such as medium-sized agro-processing facilities) or projects in sensitive areas (such as mariculture or seafloor harvesting projects) that would require additional assessment during implementation to prepare comprehensive environmental management plans as needed. For simple

projects and small producers, the ESMF includes a condensation of World Bank Group Environment Health and Safety (EHS) Guidelines for reference as a generic environmental management plan. Additional consideration is given to pest management, water supply, fertilizer use, mixed cropping (or rotation), soil conservation, and erosion control, since these are common issues in agricultural projects in the OECS. Complex projects will require individual design reviews and due diligence for emissions and discharges, labor practice, and other environmental and safety aspects.

48. World Bank policies dealing with natural habitats, pest management, and involuntary resettlement were also triggered. Natural Habitats (OP/BP 4.04) was triggered as a precaution to ensure that any affected natural habitats are adequately protected, because some of the project sites may take place near parks or protected areas, or may potentially affect lands that meet the definition of natural habitat. The Pest Management Policy (OP 4.09) was also triggered as a precaution, because pesticide use is a necessity in agricultural activities in the region, mainly because of the export potential of some products. Integrated pest management will be promoted as standard practice, and for projects with significant pest management issues a Pest Management Plan will be required to ensure that these materials are well managed. Finally, Physical Cultural Resources (PP 4.11) was also triggered as a precaution in case some excavation or earth-moving activities uncovers any unknown cultural sites.

49. The draft version of the ESMF and the RPF were discussed during stakeholder workshops held in both countries in October 2016, with the participation of Project partners and stakeholders, including representatives from potential beneficiary groups, civil society organizations, and key government agencies at national and regional level. Comments and discussion centered on clarifying the in-country pest management policies. In the case of Grenada, these documents were made public through the Government website on October 31, 2016, and, after a month of time allowed for submitting comments from stakeholders, it was revised and disclosed through the World Bank external website on January 20, 2017. A slightly revised and updated version of the ESMF and the RPF were disclosed in country and through the Bank external website on April 18, 2017. In the case of St. Vincent and the Grenadines, both safeguards documents were only made public through the Government website on January 20, 2017, requesting comments from interested stakeholders within the following 30 days period. No additional comments were received and a revised version has been disclosed in country on March 2, 2017. The final updated version of the ESMF and the RPF were disclosed in SVG and on the Bank's external website on April 18, 2017.

50. The ESMF requires that each business plan in support of each subproject agreement must include environmental management procedures. Supervision will occur through the PCU, the Ministry of Agriculture, and field extension services supported by external resources. Each country will implement its own project through the PIU, which will retain supervision and reporting responsibilities for environmental matters. Project management and TA will be provided through the Ministry of Agriculture and the agricultural extension officers, as well as through academic partners, NGOs, and consultants as needed (see details in Annex 2).

51. The Ministries of Agriculture will provide technical project management and will coordinate with the PIUs, as well as direct the liaison with beneficiaries at the field level with extension officers. Each country will develop its own blend of support, based on the government's strategy of privatization or strengthening agricultural field assistance through its own agencies.

52. TA to producers will be provided through the Ministry of Agriculture and the agricultural extension officers in each country, supported by consultants, NGOs, and academic partners who will be made

available to support the project. Additional TA is needed owing to the large number (15,000) and dispersed locations of small farmers; in line with those considerations, the recommendations for TA include: (a) Prepare terms of reference for TA to include a curriculum at the agricultural colleges, demonstration projects for integrated pest management, and training for pesticide storage and use; (b) consider terms of reference to prepare a Pest Management Plan for small producers; (c) train, certify, and promote excellence for agricultural extension officers and staff, and streamline their functions to provide a higher level of TA to aggregators; (d) use trade fairs, market days, and festivals for outreach opportunities; and (e) tie "food safety" to pesticide practices and the promotion of organic produce for higher profit.

4. Monitoring and Evaluation

53. The PIUs will oversee establishing an M&E system to track the technical, financial, social, and environmental progress and results of the project. This M&E system will monitor the performance of the project with respect to the baseline situation by tracking inputs, outputs, and progress toward the PDO and intermediate results indicators. Continuous evaluation will make it possible to design and implement operational adjustments during implementation; promote accountability for resource use against objectives; provide and receive stakeholder feedback; and generate inputs for the dissemination of results and lessons. This approach will allow constant quantification of the PDO and intermediate results indicators included in the Results Framework.

54. **Evaluation.** The PIUs will be responsible for carrying out a Mid-Term Review about two years after effectiveness. Results will allow for technical or design adjustments, if warranted. PIUs will also conduct a final evaluation at project completion. The evaluation strategy will consider differences in the state of knowledge as well as data generation capabilities, to measure outputs and impacts and to measure effectiveness and efficiency while controlling for other factors that might change over time. For FFs, the results evaluation will focus on behavioral change (use and adoption of technology), outputs, and incomes. For AAs, it will focus on final market access and competitiveness. In both cases, the analysis will consider socio-economic variables, including gender and ethnicity.

55. **Impact evaluation**. With the support of external consultants, the PCUs will carry out a small but rigorous impact evaluation of the project. The key variables to be assessed will be household (FF) net income, total sales volume, and level of employment. The evaluation will help to single out the influence of external factors (such as international market prices) that are not attributable to the project itself. Although it will not be possible to beneficiaries by gender or ethnicity before the project is underway, the analysis of impacts will be disaggregated by gender and ethnicity wherever possible.

ANNEX 3: FINANCIAL AND ECONOMIC ANALYSIS

COUNTRY: OECS Countries
Agriculture Competitiveness Project

A. Project's development impact in terms of expected benefits and costs

1. The project will support business plans that consist of two intrinsically linked parts to be supported by the project: (a) establishment and scaling up of existing aggregation schemes for selected value chains to link smallholder producers (farmers and fishers - FFs) to potential demand from diversified markets (tourism sector, local economy, regional and international markets); and (b) productivity-enhancing investments at the production level among allied FFs. The benefits of specific investments and training activities supported under (b) will be measured in terms of increased production sold and increased sales values relative to the baselines. Allied producers may also benefit through reduced post-harvest losses, improvements in product quality, as well as better and more stable prices. These benefits will be translated into increases in household incomes and contribute to poverty reduction. Investments can also lead to additional benefits at the aggregator's level, including improved economies of scale leading to incremental income (through resale premium on aggregated production from allied producers) and employment. At the macro level, the project is also expected to generate benefits that include foreign exchange savings through a reduction in the food import bill and increased exports, higher government tax revenues resulting from increased economic activity (multiplier effect), increased employment, and (depending on the degree of youth involvement) a reduction in crime among youth. Finally, the project can be expected to increase food security and generate environmental benefits resulting from adoption of improved water and crop management technologies (such as water-saving irrigation technologies, drought mitigation, more judicious use of agro-chemicals, and so on), as well as protection of fish stocks and more sustainable fish catching systems.

B. Rationale for public sector provision/financing

2. Smallholder FFs often face barriers to participating in commercially demanding value chains such as those involving hotels, supermarkets, agro-processors and exporters. The lack of aggregation of smallholder production, together with the disconnection between production and demand, cause FFs' incomes to remain uncertain, variable, and low. Quite often, small-scale producers lack access to credit, even when they are organized into associations or cooperatives. OECS states are also increasingly vulnerable to climate change, which presents a threat to rural livelihoods, especially for smallholders. Experience elsewhere (such as the *productive alliances (PA)* in Latin America, nucleus farmer-out grower models in Africa, and contract farming schemes in many regions) shows that aggregation schemes aimed at linking farmers to markets require initial public support to offset part of the startup costs and reduce risks for private financiers. The role of the public sector in providing and (co-)financing the provision of modern technologies for smallholders has also long been recognized. Both types of public support (to aggregation entities and smallholder farmers) are usually justified based on market failure arguments related to information asymmetries and scale economies.

C. Value added of Bank's support

3. The Bank has wide knowledge and experience related to the design and financing of projects aimed at improving smallholder linkages to markets, including in many Latin American countries. The principles and experience obtained in other regions and countries can be usefully applied in the new context of linking smallholder-based primary producers to the increasingly growing tourism sector, local economy, and international markets in the OECS. The Bank is also rapidly extending its knowledge about climate-smart agriculture, which is highly relevant given the vulnerability of the OECS countries to climate change. The Bank will provide technical and strategic knowledge transfer through the participation of specialists with ample experience in these areas while also sharing best practices in M&E.

D. Brief description of methodology/scope

4. Several studies examining the underlying causes of the poor performance of the agricultural and fisheries sectors in Grenada and SVG highlight the following issues: (a) lack of appropriate and affordable tools and inputs for production; (b) an inadequate information system to inform production and marketing decisions; (c) ill-defined production and marketing structures; (d) inconsistent supply of domestically produced commodities; (e) variable quality of domestic produce; and (vi) stagnating and declining production. The project would bring needed TA into the sector and provide financing for innovative productive schemes/subprojects formulated under PAs, thus strengthening the sectors and improving its linkages with tourism and other buyers and markets. The project intends also to partially fill important financing gaps at the participating ministries, contributing to growth and development.

5. The precise nature, mix, and scope of the investment subprojects cannot be defined ex ante. Under both the demand-driven and competitive approaches to be applied by the project, the specific investments to be financed will be identified during implementation. Favorable incremental financial cost-benefit analyses, financial sustainability analyses, and environmental assessments will be prerequisites for financing subprojects. To obtain an ex ante indication of the financial and economic soundness of the various types of investments likely to be financed by the project, indicative financial models for potential aggregation schemes and associated investments were analyzed using information gathered during the project preparation through interviews and work sessions with potential aggregators (AAs), buyers, and farmers/fishers (FFs) and their organizations.

6. Standard feasibility indicators (financial and economic internal rates of return, and net present value using 6% as discount rate, representing the marginal utility of consumption of the project beneficiary[9]) and the corresponding sensitivity analyses for possible proposals in the fruit and vegetable, cocoa, nutmeg, flowers, agro processing, fisheries, and the poultry sectors were estimated and are presented below.

E. Typical Business Plans

7. **Fruit and vegetable production value chains** have significant opportunities for import substitution as well as for exports. Several studies examining this possibility highlight the following barriers to import substitution through these value chains: (a) appropriate inputs at an affordable price are not available; (b) the information system to adopt production and marketing decisions is inadequate; (c) production and

[9] See Discounting Costs and Benefits in Economic Analysis of World Bank Projects, OPSPQ. May 9, 2016. "Where no country-specific growth projections are available, we suggest using 3% as a rough estimate for expected long-term growth rate in developing countries. Given reasonable parameters for the other parameters for the other variables in the standard Ramsey formula linking discount rates to growth rates, this yields a discount rate of 6%." Note prepared by Marianne Fay (GGSVP) et al, February 18, 2016.

marketing structures are ill defined; (d) supplies of domestically produced vegetables are inconsistent; (e) the quality of domestically produced fruits and vegetables is variable; and (f) greenhouse vegetable production is stagnating or declining. The PAs would be supported for developing synergies between the AAs, the farmer groups, hotel or supermarket associations, commercial banks, and TA providers. Through productive alliances (PAs) subprojects could undertake the development of their value chains with the necessary linkages to produce, package and market the required quantity and quality of products (such as soursop, nutmeg, apples, tomatoes, sweet peppers, cauliflower, corn, sweet potatoes, carrots, watermelons, etc.) complying with the buyer's specifications.

8. Two pre-feasibility case studies were analyzed for PAs involving vegetable production: (a) an AA and a group of 24 farmers in SVG; and (b) a PA with another group of 20 farmers in Grenada. The preliminary budget for the SVG horticultural group and the suitable AA (producer organization, lead farmer or exporter) with an overall investment of US$476,000 is featured in Table 1 and includes: (a) US$180,000 for introducing/improving irrigation systems for the 24 farmers; (b) US$230,000 for installing packing and storage facilities and purchasing one or two trucks to deliver the produce, a pick-up for providing TA to farmers, a tractor with implements for land preparation, and other items; (c) US$36,000 for technical services; and (d) US$30,000 for working capital. Of the total investment, about 50 percent (US$240,000) would be covered through project grants, 37 percent (US$176,000) financed by commercial bank loans, and 13 percent (US$60,000) through AA and FF beneficiaries' own resources.

Table 1 Economic Result of a Vegetable Production and Value Chain Development in SVG

ECONOMIC BUDGET (AGGREGATED) (In US$ '000)	Without Project	With Project				
	1 to 30	1	2	3	4	5 to 30
Main Production						
Vegetables	130	130	603	1,080	1,277	1,299
Production Cost						
Investment						
Land, Building & Improvements	-	30	-	-	-	-
Cold Storage & Equipment	-	40	23	-	-	-
Tractor & Machinery & Vehicles	-	77	60	-	-	-
Irrigation System	-	90	90	-	-	-
Technical Assistance Services	-	12	24	-	-	-
Working Capital	-	-	30	-	-	-
Sub-total Investment Costs	-	249	227	-	-	-
Operating						
Vegetables	-	-	279	484	561	568
Technical Assistance Services	-	-	12	60	72	72
Inputs	34	34	81	151	187	191
Labor Costs	42	48	95	166	199	203
Sub-total Operating Costs	76	82	468	863	1,023	1,038
OUTFLOWS	76	331	695	863	1,023	1,038
Cash Flow	54	-202	-93	217	254	261
IRR = 38.2%, NPV = 1,220.1						

9. Detailed crop and farm models underlying this SVG vegetables BP are detailed in in the project working documents (file ST_VT_Hort_Nov_2016.xls Tables 1 to 16), while prefeasibility financial budgets for the AA's packing facilities and the overall sub-projects' BP economic budget are detailed in Tables 17 and 18. The 3-acre farm models (Tables 14 to 16) show a more than fourfold increase in farmers' annual net income from an average of about US$4,000 to US$16,790. Overall, the SVG's AA and FF horticulture subproject would have an ERR of 38.2 percent and a NPV of US$1.22 million (with 6 percent as discount rate).

10. Similarly, the PA case of 20 vegetable growers and their AA in Grenada would invest US$393,600,

including similar improvements as in the previous case. Of this investments, about 55 percent (US$215,000) would be covered through project grants, 39 percent (US$153,400) would be financed by commercial banks, and 6 percent (US$25,200) from the allied AA and FF' own resources. Detailed crop and farm models are presented in GREN_Hort_Nov_2016.xls Tables 1 to 9 in the project working documents, while prefeasibility budgets for the AA packing facilities (financial budget) and the overall sub-project (economic budget) are detailed in Tables 10 and 11. The farm models show an increase in farmers' annual net income from an average of about US$7,800 to US$14,500. Overall, the Grenada horticulture subproject (see the Table 2 below) would have an ERR of 25.4 percent and a NPV of US$644,200.

Table 2 Economic Result of a Vegetable Production and Value Chain Development in Grenada

ECONOMIC BUDGET (AGGREGATED) (In US$ '000)	Without Project	With Project				
	1 to 15	1	2	3	4	5 to 15
Main Production						
Vegetables	267.1	267.1	670.0	876.8	1,055.8	1,107.2
Production Cost						
Investment						
Land, Building & Improvements	-	25.0	-	-	-	-
Cold Storage and Equipment	-	32.0	15.0	-	-	-
Vehicles, Tractor & Machinery	-	70.0	32.0	-	-	-
Knapsack Sprayer, Crates	-	6.8	6.8	-	-	-
Irrigation System	-	75.0	75.0	-	-	-
Technical Assistance Services	-	12.0	24.0	-	-	-
Working Capital	-	-	20.0	-	-	-
Sub-total Investment Costs	-	220.8	172.8	-	-	-
Operating						
Knapsack Sprayer	9.4	9.4	10.6	12.3	12.7	12.7
Vegetables	-	-	302.9	397.2	477.5	502.1
Technical Assistance Services	-	-	38.0	46.0	62.0	70.0
Inputs	64.7	64.7	80.5	101.0	111.2	111.8
Labor Costs	98.3	104.3	122.6	148.7	163.8	165.3
Sub-total Operating Costs	201.9	207.9	588.0	745.9	871.6	906.3
Sub-Total Production Cost	201.9	428.7	760.8	745.9	871.6	906.3
OUTFLOWS	201.9	428.7	760.8	745.9	871.6	906.3
Cash Flow	65.2	-161.6	-90.9	130.9	184.2	200.9
IRR = 25.4%, NPV = 644.2						

11. **Several opportunities in the agro-processing business** are also available for increasing the market share of Grenada and SVG produce in the domestic, regional and international markets. Supermarkets provide an important channel for agricultural marketing providing a direct channel for domestic consumers, especially those with a higher disposable income and purchasing power. However, the domestic markets are too small and therefore not capable of absorbing a large percentage of the agro processed production capacity. Hence, there is a need to explore and support other alternatives. For example a SVG based member of the Winfresh family, Vincyfresh, aims to become a premier food processing company specializing in Caribbean root crops and vegetables. Vincyfresh, as well as other players in this sector are planning to diversify their current products including different types of fruit juices, convenient (frozen) food packs, and a range of other products. In Grenada, Winfresh also provides farmers and the rural community members with a ready market for several fresh and processed fruits.

12. **Cocoa value chain**. The passage of hurricanes Ivan and Emily in 2004 and 2005 destroyed almost 80 percent of nutmeg and cocoa trees in Grenada affecting production and exports that dropped from EC$43 million in 2003 to less than 20 percent that amount in 2006. The Ministry of Agriculture has been

helping in the replanting of trees. It is expected that some farmers' cooperatives would be requesting support in this process, through provision of seedlings of improved materials, and small machines for weeding and opening ditches for draining the orchards during the rainy season. Table 3 shows an example where a typical farm with 3 acres of mixed fruits (nutmeg, cocoa, soursop, golden apple, etc.) could increase production and revenues by about 30 percent by replanting improved seedlings and managing their orchard.

Table 3 Cocoa, Nutmeg and Other Mixed Fruits Farm Rehabilitation Model (3 acres)

FINANCIAL BUDGET (DETAILED) (In US$)	Without Project	With Project				
	1 to 10	1	2	3	4	5 to 10
Main Production						
Nutmeg	2,414	2,414	2,548	2,745	3,020	3,294
Cocoa Wet	2,088	2,088	2,192	2,455	2,678	2,902
Soursoap	1,776	1,776	1,954	2,131	2,220	2,220
Sub-total Main Production	6,278	6,278	6,694	7,331	7,918	8,416
Production Cost						
Investment						
Seedlings	-	750	-	-	-	-
Opened Drainage Ditches	-	270	-	-	-	-
Mechanical Weeding	-	450	-	-	-	-
Labor	-	1,256	-	-	-	-
Sub-total Investment Costs	-	2,726	-	-	-	-
Operating						
Fertilizers	900	900	1,050	1,050	1,050	1,050
Opened Drainage Ditches	-	-	180	180	180	180
Mechanical Weeding	-	-	300	300	300	300
Touch Down	450	450	720	720	720	720
Labor	754	754	653	704	754	804
Sub-total Operating Costs	2,104	2,104	2,903	2,954	3,004	3,054
OUTFLOWS	2,104	4,830	2,903	2,954	3,004	3,054
Cash Flow Before Financing	4,174	1,448	3,791	4,378	4,914	5,362
Transfer from Previous Period	105	105	145	148	150	153
Contribution from own savings	-	3,255	-	-	-	-
Grants	-	1,470	-	-	-	-
Sub-Total Financial Inflows	105	4,830	145	148	150	153
Transfer to Next Period	105	145	148	150	153	153
Net Financing	-	4,685	-3	-3	-3	-
Cash Flow After Financing	4,174	6,133	3,788	4,375	4,912	5,362
Sub-Total Change in Net Worth	-	-3,255	-	-	-	-
Farm Family Benefits After Financing	4,174	2,878	3,788	4,375	4,912	5,362
IRR = 37.4%, NPV = 3,637.0						
Main Production (in pounds)						
Nutmeg	810	810	855	900	990	1,080
Cocoa Wet	3,600	3,600	3,780	3,960	4,320	4,680
Soursoap	2,400	2,400	2,640	2,880	3,000	3,000

13. The cocoa production in Grenada has been recovering from the destruction caused by the 2003 and 2004 hurricanes, having already surpassed the previous hurricanes production levels. With 3,700 active members, the Grenada Cocoa Association (GCA) activities impact the livelihood of about a third of the people in the country. Table 4 shows a summary budget of a possible BP proposal from a local cooperative with about 70 members producing nutmeg, cacao and other fruits. By investing about US$227,000 in seedlings and small machines for providing services to their members the maintenance works in the orchards would be facilitated improving the management of their farms. The proposal would require a grant of about US$128,000 and would result in an increased value of production for the 70 members by about 50 percent, and obtaining a financial internal rate of return (FIRR) of more than 100% (due to the grant financing 56% of the investment), and an economic rate of return (ERR) of 22.8%.

Table 4 Cocoa and Nutmeg Local Farmers Cooperative Subproject

FINANCIAL BUDGET (AGGREGATED)							
(In US$ '000)	hout Project	With Project					
	1 to 14	1	2	3	4	5	6 to 14
Main Production							
Nutmeg	169.0	169.0	174.3	186.2	203.1	222.3	230.6
Cocoa Wet	146.2	146.2	150.3	164.0	180.8	196.4	203.1
Soursoap	124.3	124.3	131.4	143.9	152.7	155.4	155.4
Services	-	-	38.4	76.8	76.8	76.8	76.8
Sub-total Main Production	439.4	439.4	494.5	570.9	613.5	651.0	665.9
Production Cost							
Investment							
Land, Building, Equipment & Improvements	-	26.0	-	-	-	-	-
Inputs	-	35.0	22.5	-	-	-	-
Services and TA	-	33.8	21.6	-	-	-	-
Labor Costs	-	50.3	37.7	-	-	-	-
Sub-total Investment Costs	-	145.1	81.8	-	-	-	-
Operating							
Inputs	94.5	94.5	123.7	148.7	148.7	148.7	148.7
Services	-	-	19.2	33.6	33.6	33.6	33.6
Labor Costs	52.8	52.8	69.8	89.9	93.4	96.9	98.4
Sub-total Operating Costs	147.3	147.3	212.7	272.2	275.7	279.2	280.7
Sub-Total Production Cost	147.3	292.3	294.5	272.2	275.7	279.2	280.7
Cash Flow Before Financing	292.2	147.1	200.0	298.7	337.8	371.7	385.2
Net Financing 1/	-	221.7	138.8	-0.2	-0.2	-0.1	-
Cash Flow After Financing	292.2	368.9	338.8	298.5	337.6	371.7	385.2
Sub-Total Change in Net Worth	-	-141.0	97.6	-	-	-	-
Farm Family Benefits After Financing	292.2	227.9	436.4	298.5	337.6	371.7	385.2
IRR = 152.7%, NPV = 680.6	**Without**						
1/ Financing Summary	**Project**	**With Project**					
Inflows	**1 to 15**	**1**	**2**	**3**	**4**	**5**	**6 to 14**
Grants	-	84.0	44.1	-	-	-	-
Contribution from own savings	-	141.0	97.6	-	-	-	-
Transfer from Previous Period	7.4	7.4	10.6	13.6	13.8	14.0	14.0
Total Inflows	7.4	232.4	152.4	13.6	13.8	14.0	14.0
Outflows	7.4	10.6	13.6	13.8	14.0	14.0	14.0
Net Financing	-	221.7	138.8	-0.2	-0.2	-0.1	-

ECONOMIC BUDGET (AGGREGATED)	Without						
(In US$ '000)	Project	With Project					
	1 to 15	1	2	3	4	5	6 to 15
Main Production	439.4	439.4	494.5	570.9	613.5	651.0	665.9
Production Cost							
Investment	-	145.1	81.8	-	-	-	-
Operating	147.3	147.3	212.7	272.2	275.7	279.2	280.7
OUTFLOWS	147.3	292.3	294.5	272.2	275.7	279.2	280.7
Cash Flow	292.2	147.1	200.0	298.7	337.8	371.7	385.2
IRR = 22.8%, NPV = 393.5							

14. **The Grenada Cocoa Association (GCA) has plans for renovating the subsector by improving value added and product quality through an expanded control of the fermentation and cocoa drying processes**. For achieving this goal, the GCA need to increase their processing capacity by investing about US$620,000 so that they can receive all available wet cocoa. By a strict control of the process, they would be able to improve the average quality of the 1.8 million pounds of dry cocoa being exported annually, increasing the average price being attained (from about US$1.77 to US$1.88 per pound). Table 5 shows that with the upgrading of its facilities with support of a matching grant of around US$140,000, even with no increase in production, it would be possible to attain a ERR of 11.2% by reducing the rejected product for quality reasons. The FIRR would reach 19% even after rising the average price paid to farmers from US$0.58 to US$0.62 per pound of wet cocoa (7% increase), just from having a better control of the fermentation and drying processes meeting the requirements of their buyers. Details of this BP are in Tables 1 to 4 of the Working Paper Other GREN_SVG subproject.xls.

Table 5 Improving Processing Capacity of the Grenada Cocoa Association

ECONOMIC BUDGET (AGGREGATED) (In US$ '000)	Without Project	With Project				
	1 to 15	1	2	3	4	5 to 15
Main Production						
Cocoa Dry	3,186	3,186	3,253	3,454	3,655	3,722
Production Cost						
Investment						
Land, Building & Improvements	-	400	-	-	-	-
Equipment	-	200	-	-	-	-
Technical Assistance Services	-	20	-	-	-	-
Sub-total Investment Costs	-	620	-	-	-	-
Operating						
Cocoa Wet	2,610	2,610	2,657	2,798	2,938	2,985
Technical Assistance Services	-	-	12	12	12	12
Inputs	217	217	218	221	224	225
Labor Costs	288	288	292	302	313	316
Sub-total Operating Costs	3,115	3,115	3,178	3,333	3,487	3,538
Sub-Total Production Cost	3,115	3,735	3,178	3,333	3,487	3,538
OUTFLOWS	3,115	3,735	3,178	3,333	3,487	3,538
Cash Flow	71	-549	75	122	168	184
IRR = 11.2%, NPV = 244.5						

15. Similar to the cocoa subsector, *the nutmeg subsector in Grenada* has been struggling to recover production and exports after the hurricanes. According to the Grenada Cooperative Nutmeg Association (GCNA) the improvement of post-harvest processing following food safety standards from the EU market requirements is essential for the business future. The more than 500 MT being sold at about EC$8 per pound could be sold at EC$10 if properly processed. Table 6 show that the planned investment of US$690,000 towards this end, even without any increase of the current production levels, would yield an ERR of 17.3%, and as shown in Table 5 in the mentioned Working Paper, with the US$140,000 grant, the FIRR would reach at 23.9%.

Table 6 Cooperative Nutmeg Association Subproject

ECONOMIC BUDGET (AGGREGATED) (In US$ '000)	Without Project	With Project				
	1 to 15	1	2	3	4	5 to 15
Main Production						
Nutmeg Packed	3,982.0	3,982.0	4,054.3	4,271.0	4,487.8	4,560.0
Production Cost						
Investment	-	690.0	-	-	-	-
Operating						
Nutmeg	3,278.0	3,278.0	3,325.8	3,469.0	3,612.3	3,660.0
Technical Assistance Services	-	-	20.0	20.0	20.0	20.0
Inputs	396.0	396.0	397.3	401.0	404.8	406.0
Labor Costs	143.0	143.0	141.3	136.0	130.8	129.0
Sub-total Operating Costs	3,817.0	3,817.0	3,884.3	4,026.0	4,167.8	4,215.0
Sub-Total Production Cost	3,817.0	4,507.0	3,884.3	4,026.0	4,167.8	4,215.0
OUTFLOWS	3,817.0	4,507.0	3,884.3	4,026.0	4,167.8	4,215.0
Cash Flow	165.0	-525.0	170.0	245.0	320.0	345.0
IRR = 17.3%, NPV = 667.94						

16. **Coconut water bottling.** There are 4 artisanal bottlers of branded coconut water in SVG supplying approximately 6,000 bottles per week. These 4 agro-processors bottle the raw coconut water as they do not add preservatives or additives. The industry is profitable with gains for all actors in the value chain, and there are still substantial opportunities for growth of the coconut water industry in SVG: bottlers estimated that given the current stock of coconut trees in the country, there will be available nuts for a

doubling of the production of bottled coconut water. A recent FAO analysis[10] concluded that there could be significant cost reductions (per unit of product) if throughput of the bottling facilities are substantially increased which translates into increased returns to owners. It also indicates that distribution costs could be substantially reduced through cooperative action or consolidation. The benefits of cooperative action or consolidation of bottlers was identified in the Stakeholders Workshop held on 26 May 2016. Table 7 shows a preliminary analysis of a tentative BP regarding the implementation of the recommended development of the industry in SVG, including new plantations of coconut trees. Details in this BP are shown in Tables 6 and 7 of the above-mentioned Working Paper.

Table 7 Coconut Water Bottling Aggregator Subproject

FINANCIAL BUDGET (AGGREGATED) (In US$ '000) /a	Without Project	With Project						
	1 to 14	1	2	3	4	5	6 to 8	9 to 14
Main Production								
Coconut	-	-	-	-	-	15	30	30
Coconut Water	78	78	98	156	215	234	234	234
Vegetables	95	95	119	132	132	132	132	132
Sub-total Main Production	173	173	216	288	346	381	395	395
Investment								
Land, Building & Improvements	-	60	-	-	-	-	-	-
Equipment & Refrigerated Vehicles	-	52	70	-	-	-	-	-
Inputs	-	6	5	5	5	5	-	-
Sub-total Investment Costs	-	117	75	5	5	5	-	-
Operating								
Equipment	2	2	2	3	4	4	4	4
Coconut	11	11	14	22	31	33	33	33
Technical Assistance Services	-	-	4	4	4	4	4	4
Inputs	86	86	106	132	151	158	163	163
Labor Costs	10	10	12	17	22	24	24	24
Sub-total Operating Costs	109	109	139	179	213	224	229	229
Sub-Total Production Cost	109	227	214	184	218	229	229	229
Cash Flow Before Financing	64	-54	2	104	129	152	167	167
Net Financing	-	212	60	-11	-20	-19	-19	-
Cash Flow After Financing	64	158	62	93	109	133	148	167
Sub-Total Change in Net Worth	-	-109	-	-	-	-	-	-
Farm Family Benefits After Financing	64	49	62	93	109	133	148	167

IRR = 125.2%, NPV = 631.5

\a A coconut water bottler upgrades its current operation incorporating food safety equipment and trippling capacity. In alliance with farmer suppliers also 10 - 12 acres of new coconut plantations are developed by 20 - 25 farmers.

Financing Summary	Without Project	With Project					
Inflows	1 to 14	1	2	3	4	5 to 8	9 to 14
Grants	-	63	40	-	-	-	-
Contribution from own savings	-	109	-	-	-	-	-
Disbursements on Long Term Principal	-	44	28	-	-	-	-
Transfer from Previous Period	11	11	15	18	22	23	23
Total Inflows	11	227	83	18	22	23	23
Outflows							
Long Term Repayments	-	-	4	7	19	19	-
Transfer to Next Period	11	15	18	22	23	23	23
Total Outflows	11	15	23	29	42	42	23
Net Financing	-	212	60	-11	-20	-19	-

10 Value Chain Analysis and Upgrading Strategy for the Coconut Water Value Chain in St. Vincent and the Grenadines TCP/STV/3501, June 2016 The major issues in the bottling segment of the value chain relate to good manufacturing practices, and cost for bottles and labels. Additionally, all processors have constraints of financial resources and therefore have difficulties undertaking the upgrades required to meet standards of good manufacturing practices and food safety.

ECONOMIC BUDGET (AGGREGATED)	Without Project	With Project					
(In US$ '000) /a	1 to 14	1	2	3	4	5	6 to 14
Main Production	173	173	216	288	346	381	395
Investment	-	124	78	7	6	6	-
Operating	141	141	177	221	254	266	272
OUTFLOWS	141	265	255	228	261	272	272
Cash Flow	32	-92	-39	60	86	109	123
IRR = 28.5%, NPV = 445.8							

The fishing sector.

17. In Grenada and SVG, fishing makes an important contribution to the economy, as it generates income and employment through commercial fishing, recreational activities, and tourism. The average per capita food supply from fish/fishery product is about 40 kg/person and the average percentage contribution of fishing to GDP is 1.5%. Fisheries are artisanal in nature, with an estimated 3 - 4 thousand fishers operating from over 2,000 vessels at dozens of fish landing sites. Fisheries are multi-species and multi-gears, and combined produce on average of around 3,700 MT of fish products each year (Grenada 2,200 MT, and SVG 1,500 MT).

18. The Grenadian fishery sector has been showing levels of rising production, with a relatively steady progress from an annual landing of around 300 tons in 1950 to 2,500 tons now. It has assumed a greater importance in recent years: after hurricane Ivan (2004) it was one of the first primary productive sectors to spring back into life, playing a significant role in reviving the economy. The fishing fleet includes a mixture of (a) relatively advanced, well equipped and well maintained larger vessels with inboard diesel engines (long liners), (b) outboard powered open boats and (c) small subsistence inshore boats. In short, it spans the modern and the traditional, a divide that continues through to the downstream sector, and exemplifies the fisheries sector's national socioeconomic role[11].

19. Key aspects of the sector's contribution to the national economy include: (a) the employment and economic activity it supports, especially in the more remote and disadvantaged island communities; (b) the expanding export of high-value fish (fresh tuna) that has emerged in recent years generating significant level of foreign exchange; (c) its role in national food security and poverty alleviation – especially the small inshore pelagic (jacks) that can be caught with inexpensive gear and are sold at low prices; and (iv) it also has an significant role in the fast growing tourism industry, much of which has a strong aquatic orientation (mainly diving and sports fishing).

20. The tourism sector is estimated to be worth EC$ 250 million to Grenada annually (12% of GDP) after all accommodation, foodservice and other inputs are accounted for. A significant key interaction between the tourism/leisure sector and fisheries is the demand tourism creates for high quality food fish: tourists visiting the Caribbean expect to eat fish and the abundance of prime species in the Grenadian catch is an advantage here – with dolphin (mahi mahi), tuna, wahoo/kingfish, snapper, grouper, lobster and conch, all in this category. Tourism then plays a role in both expanding the market for Grenada's prime catch and maintaining higher prices for fishers. This has implications for fisheries operators in that quality and

[11] From a social perspective, the industry is segmented by gender - as a rule, women are more involved in fish marketing and primary processing, while men are involved in primary production. The sector also spans the social spectrum, with the relatively wealthy involved in processing and commercial long lining whilst – at the other extreme - spear fishing and beach seining for jacks can provide economic and food security options for the poorest. The main shore-based expression of the fisheries sector comprises several fisheries centers that variously include harbors or other facilities for fishers, ice production, fish storage capacity and fish markets.

preservation standards akin to those for export are required. This enhances the need for proper icing of fish and close attention to its treatment from catch to sale. Promoting the realization of this and backing it up with facilities such as the fisheries centers and their ice plants/fish storage capacity is consequently important and the project can play an important role for it.

21. **In SVG the fisheries sector is less developed than in Grenada**. According to the Goodwill Fishers Cooperative two aspects that need urgent support that are generally used in Grenada but not in SVG is (a) the use of more efficient 4 stroke engines for the 20 feet fishing boats instead of the 2 stroke engines; and (b) the introduction of a medium size boat (about 40 feet) which would allow for 5 to 6 days fishing trips, reaching areas where higher value catch could be obtained, instead of the smaller boats that allows for only 1 day fishing trips. The more efficient 4 stroke engines allows saving 25 to 50% on gas and oil expenses, which directly derives in an increase in the net income for fishers of 40%. Table 8 shows the numbers involved in what seems to be one of the felt needs from the fishers in SVG according to the cooperative leaders, which would allow for 25 of their members to change their engines.

Table 8 Fishers Cooperative Changing Engines from 2 to 4 Strokes for 25 Members' Boats

FINANCIAL BUDGET (DETAILED) (In US$)	Without Project	With Project							
	1 to 10	1	2 to 3	4	5	6	7	8	9 to 10
Main Production									
Fish	61,200	61,200	61,200	61,200	61,200	61,200	61,200	61,200	61,200
Investment									
Equipment	-	1,200	-	-	-	-	-	-	-
Engine 75 HP (4 stroke)	-	11,800	-	-	-	-	-	-	-
Operating									
Gas	25,000	25,000	18,750	18,750	18,750	18,750	18,750	18,750	18,750
Other Costs	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500
Labor	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
OUTFLOWS	44,500	57,500	38,250	38,250	38,250	38,250	38,250	38,250	38,250
Cash Flow Before Financing	16,700	3,700	22,950	22,950	22,950	22,950	22,950	22,950	22,950
Financial Inflows									
Disbursements on Long Term Loan	-	5,200	-	-	-	-	-	-	-
Transfer from Previous Period	4,450	4,450	3,825	3,825	3,825	3,825	3,825	3,825	3,825
Contribution from own savings	-	38,750	-	-	-	-	-	-	-
Grants	-	9,100	-	-	-	-	-	-	-
Sub-Total Financial Inflows	4,450	57,500	3,825	3,825	3,825	3,825	3,825	3,825	3,825
Financial Outflows									
Long Term Principal	-	-	-	852	937	1,031	1,134	1,247	-
Long Term Interest	-	-	520	520	435	341	238	125	-
Transfer to Next Period	4,450	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825
Sub-Total Financial Outflows	4,450	3,825	4,345	5,197	5,197	5,197	5,197	5,197	3,825
Net Financing	-	53,675	-520	-1,372	-1,372	-1,372	-1,372	-1,372	-
Cash Flow After Financing	16,700	57,375	22,430	21,578	21,578	21,578	21,578	21,578	22,950
Sub-Total Change in Net Worth	-	-38,750	-	-	-	-	-	-	-
Farm Family Benefits After Financing	16,700	18,625	22,430	21,578	21,578	21,578	21,578	21,578	22,950

ECONOMIC BUDGET (AGGREGATED) (In US$ '000) /a	Without Project	With Project		
	1 to 14	1	2	3 to 14
Main Production				
Fish Products	1,530	1,530	1,530	1,530
Production Cost				
Investment	-	225	130	-
Operating	1,113	1,113	1,026	964
OUTFLOWS	1,113	1,337	1,156	964
Cash Flow	418	193	374	566
IRR = 40.7%, NPV = 524.95				

22. Similarly, another possible proposal from the SVG fisheries community could involve a request to incorporate a 40-feet equipped fishing vessel to demonstrate in SVG the economic advantages of the 5 to 6 day fishing trips on bigger boats over the regular one-day trips in small subsistence inshore boats. Table 9 shows the financial and economic results of an investment of US$230,000 for this alternative which could yield an ERR of 18.4%. The FIRR would be 27.4% assuming that the investment is covered partially with a matching grant of US$100,000.

Table 9 Fishers Cooperative: 40 feet Boat Demonstration) Subproject

FINANCIAL BUDGET (AGGREGATED)	With Project					
(In US$ '000) /a	1	2	3	4 to 7	8	9 to 14
Main Production						
Fish Products	-	300	405	405	405	405
Production Cost						
Investment						
Equipment	40	-	-	-	-	-
Boat &Engine 75 HP (4 stroke)	20	-	-	-	-	-
Vessel (40 feet)	150	-	-	-	-	-
Technical Assistance Services	10	10	-	-	-	-
Sub-total Investment Costs	220	10	-	-	-	-
Operating						
Purchased Inputs	56	166	178	178	178	178
Inputs	-	29	29	29	29	29
Sub-Total Production Cost	276	329	331	331	331	331
Cash Flow Before Financing	-276	-29	74	74	74	74
Net Financing	237	-4	-8	-21	-21	-
Cash Flow After Financing	-39	-33	66	53	53	74
Sub-Total Change in Net Worth	-100	-	-	-	-	-
Farm Family Benefits After Financing	-139	-33	66	53	53	74

IRR = 27.4%, NPV = 355.93

\a A fishermen Cooperative incorporates a 40 feet boat for 5 to 6 day trip fishing tuna for export markets as demonstra
business plan for changing from traditional 20 feet boats doing 1 day trip fishing dolfin/mahi-mahi for local market.

1/ Financing Summary	1	2	3	4 to 8	9 to 14
Inflows					
Grants	100	-	-	-	-
Contribution from own savings	100	-	-	-	-
Disbursements on Long Term Principal	76	4	-	-	-
Transfer from Previous Period	-	39	40	40	40
Total Inflows	276	43	40	40	40
Outflows					
Long Term Repayments	-	8	8	21	-
Transfer to Next Period	39	40	40	40	40
Total Outflows	39	48	48	61	40
Net Financing	237	-4	-8	-21	-

ECONOMIC BUDGET (AGGREGATED)	With Project		
(In US$ '000) /a	1	2	3 to 14
Main Production			
Fish Products	-	300	405
Investment	220	10	-
Operating			
Purchased Inputs	56	166	178
Labor	-	29	29
Sub-Total Production Cost	276	329	331
OUTFLOWS	276	329	331
Cash Flow	-276	-29	74

IRR = 18.4%, NPV = 295.49

23. **The poultry value chain** is another clear case in which the project can introduce missing linkages that have been preventing the agricultural sector from realizing its potential for development. Grenada's single biggest food import is poultry with an import bill of about US$12 million per year. The Grenada Association of Poultry Farmers (GAPF) has 450 member farmers producing eggs and chicken meat (Grenada is self-sufficient in egg production). The association is working on a new poultry policy and an investment plan to develop the industry, and is seeking assistance for its integrated approach. The policy

includes: (a) reduction of the price of poultry feed produced under a monopolistic concession to Caribbean Agro Industries; (b) upgrading of commercial hatcheries; and (c) expansion of the production facilities of members of the association.

24. Table 10 show the preliminary financial budget of a BP to be developed by the GAPF aiming to invest US$800,000 for processing 1.2 million birds per year into 3.96 million pounds of chicken meat (valued at about US$8.24 million). The project could support a PA between the association, an association of hotels and/or supermarkets, a financial bank, the Ministry of Agriculture, and a TA service provider to facilitate this development. The budget presented in the table assumed that the project could provide a grant to cover 15 percent of the investment (US$120,000), the allied bank could finance 70 percent (US$562,000) at market rates, and the GAPF could provide the remaining 15 percent (US$120,000). The expected FRR of this BP investment after the debt service would be 15.3%, while the NPV would be US$234,370.

Table 10 Grenada Association of Poultry Producers Processing Plant

FINANCIAL BUDGET (DETAILED)	With Project								
(In US$ '000)	1	2	3	4	5	6	7	8	9 to 14
Main Production									
Birds (whole)	-	416	1,247	2,079	3,119	3,119	3,119	3,119	3,119
Bird (parts)	-	683	2,049	3,416	5,123	5,123	5,123	5,123	5,123
Sub-total Main Production	-	1,099	3,297	5,495	8,242	8,242	8,242	8,242	8,242
Investment									
Equipment	550	-	-	-	-	-	-	-	-
Vehicles	100	-	-	-	-	-	-	-	-
Other Investments	130	-	-	-	-	-	-	-	-
Working Capital	20	50	-	-	-	-	-	-	-
Sub-total Investment Costs	800	50	-	-	-	-	-	-	-
Operating									
Crates for Chicken	-	-	25	25	25	25	25	25	25
Chicks (4.7 lb live weigth)	-	947	2,842	4,737	7,105	7,105	7,105	7,105	7,105
Utilities	-	170	51	92	105	105	105	105	105
Building Rental	-	12	12	12	12	12	12	12	12
Packing Materials	-	20	40	80	100	100	100	100	100
Transport & Travel Costs	-	14	40	60	90	90	90	90	90
Operation & Maintenance	-	4	15	30	40	40	40	40	40
Labor Costs	-	60	180	230	340	340	340	340	340
Professional Fees	-	40	60	80	80	80	80	80	80
Sub-total Operating Costs	-	1,267	3,265	5,346	7,897	7,897	7,897	7,897	7,897
OUTFLOWS	800	1,317	3,265	5,346	7,897	7,897	7,897	7,897	7,897
Cash Flow Before Financing	-800	-218	32	149	344	344	344	344	344
Financial Inflows									
Disbursements on Long Term Loan	562	40	-	-	-	-	-	-	-
Transfer from Previous Period	-	128	327	535	790	790	790	790	790
Contribution from own savings	118	-	-	-	-	-	-	-	-
Grants	120	-	-	-	-	-	-	-	-
Sub-Total Financial Inflows	800	168	327	535	790	790	790	790	790
Financial Outflows									
Long Term Principal	-	-	27	119	98	108	119	131	-
Long Term Interest	-	56	60	58	46	36	25	13	-
Transfer to Next Period	128	327	535	790	790	790	790	790	790
Sub-Total Financial Outflows	128	383	621	966	934	934	934	934	790
Net Financing	672	-215	-295	-431	-144	-144	-144	-144	-
Cash Flow After Financing	-128	-433	-263	-283	200	200	200	200	344
Sub-Total Change in Net Worth	-118	-	-	-	-	-	-	-	-
Farm Family Benefits After Financing	-246	-433	-263	-283	200	200	200	200	344
IRR = 15.3%, NPV = 234.37									

25. Also for the development of the poultry sector, some of the farmer groups of the association could request support for scaling up their poultry production business as adequate processing and ensured markets are put in place under the PA. Table 11 show the preliminary budget for this upgrading, involving investments of US$600,000 and a group of 12 poultry producers (6 in the first year and 6 in the second) investing US$50,000 each in new chicken pens to increase production to about 20,000 birds in 7 cycles per farm, per year. The project could support with grants (about US$10,000 per farm) while the private

Bank engaged in the PA would finance 70% of the investment (US$35,000 per farmer). Table 11 shows the budget for the poultry farms group yielding a FIRR of 22.2%.

Table 11 Grenada Poultry Farm Association (12 poultry farms) Subproject

FINANCIAL BUDGET (DETAILED) (In US$)	Without Project	With Project					
	1 to 10	1	2	3	4	5 to 8	9 to 10
Main Production							
Sweet Potato	12,600	12,600	14,700	16,800	16,800	16,800	16,800
Chicks (4.7 lb live weigth)	36,000	36,000	378,000	900,000	1,260,000	1,440,000	1,440,000
Sub-total Main Production	48,600	48,600	392,700	916,800	1,276,800	1,456,800	1,456,800
Off Farm Employment							
Labor	14,400	14,400	-	-	-	-	-
INFLOWS	63,000	63,000	392,700	916,800	1,276,800	1,456,800	1,456,800
Production Cost							
Investment							
Chicken Pen Equipped for 3,300 birds	-	300,000	300,000	-	-	-	-
Working Capital	-	-	6,000	6,000	-	-	-
Sub-total Investment Costs	-	300,000	306,000	6,000	-	-	-
Operating							
Purchased Inputs	16,918	16,918	319,991	777,870	1,087,482	1,242,288	1,242,288
Hired Labor	-	-	-	-	9,240	18,480	18,480
Professional Fees	-	-	6,000	18,000	24,000	24,000	24,000
Sub-total Operating Costs	16,918	16,918	325,991	795,870	1,120,722	1,284,768	1,284,768
OUTFLOWS	16,918	316,918	631,991	801,870	1,120,722	1,284,768	1,284,768
Cash Flow Before Financing	46,082	-253,918	-239,291	114,930	156,078	172,032	172,032
Financial Inflows							
Disbursements on Long Term Loan	-	210,000	210,000	-	-	-	-
Transfer from Previous Period	1,692	1,692	42,199	80,187	112,072	128,477	128,477
Grants	-	120,000	-	-	-	-	-
Sub-Total Financial Inflows	1,692	331,692	252,199	80,187	112,072	128,477	128,477
Financial Outflows							
Long Term Principal	-	-	-	-	68,795	75,674	-
Long Term Interest	-	-	21,000	42,000	42,000	35,121	-
Transfer to Next Period	1,692	42,199	80,187	112,072	128,477	128,477	128,477
Sub-Total Financial Outflows	1,692	42,199	101,187	154,072	239,272	239,272	128,477
Net Financing	-	289,493	151,012	-73,885	-127,200	-110,795	-
Cash Flow After Financing	46,082	35,575	-88,279	41,045	28,878	61,237	172,032
IRR = 22.2%, NPV = 153,560.3							

26. As can be seen in the Table 11, private Bank loans were assumed at an interest rate of 10% per year, 8 years for repayment including a grace period of 3 years. However, it is expected that these conditions could be improved and that interest rates reduced even to about 2 – 3% with the support of the PA arrangements, which would minimize productive and marketing risks. Even with the 10% interest rates, each farmer would at least increase their net income from about US$3,840 to US$14,336 per year after the loan is repaid.

27. The aggregation of the poultry processing plant and 5 poultry farmers' associations of the type presented above would result in an investment of US$3.9 million and a US$8.24 million of processed poultry meat sold per year at maturity in the 6th year. Table 12 presents the aggregated budget which would involve US$720,000 in project grants for the 6 associations involved, US$2.7 million of loans from private Banks and farmers' contributions that would result in an aggregate operation averaging a FRR of 18%, an (ERR of 14.3%, and a NPV of US$2.32 million. This model is to be seen as indicative; in practice, it could be phased, with lower processing volumes and reduced financial requirements. However, the alternatives should be adequately assessed since economies of scale play an important role on the poultry industry viability.

Table 12 Grenada Poultry Sector Development

ECONOMIC BUDGET (AGGREGATED) (In US$ '000)	Without Project	With Project					
	1 to 15	1	2	3	4	5	6 to 15
Main Production							
Vegetables	63	63	67	78	84	84	84
Chicks (4.7 lb live w eigth)	180	180	864	2,934	5,220	6,660	7,200
Birds (w hole)	-	-	416	1,247	2,079	3,119	3,119
Bird (parts)	-	-	683	2,049	3,416	5,123	5,123
Sub-total Main Production	243	243	2,030	6,308	10,799	14,986	15,526
Production Cost							
Investment	-	1,400	1,562	930	18	-	-
Operating	206	206	2,110	6,039	10,254	14,137	14,630
Sub-Total Production Cost	206	1,606	3,672	6,969	10,272	14,137	14,630
Cash Flow	37	-1,363	-1,642	-661	526	848	896
IRR = 14.3%, NPV = 2,322.2							

28. **Flower cuts**. Another subsector that has also been seen as with high potential for Grenada and SVG, given their ecological and microclimate environment, is the production of high value flowers for the domestic and regional tourism and export markets. The Flowers Growers Association identified the need for investing in adequate greenhouses for the production of anthurium cut flowers. For growing these flowers, the production environment has to be controlled including 75% shade net house with 70 - 80% relative humidity, day temperature of 24 - 28^{0}C and night temperature of 15 - 22^{0}C. Table 14 summarizes the economic result of the investment which would attain an ERR of 20.2%. The detailed financial analysis is presented in Table 10 in the above mentioned Working Paper.

Table 14 Flower Growers Association Subproject

ECONOMIC BUDGET (AGGREGATED)	With Project			
(In US$ '000)	1	2	3	4 to 15
Flowers	-	72.0	108.0	144.0
Investment	222.7	-	-	-
Operating	-	59.5	74.5	82.0
OUTFLOWS	222.7	59.5	74.5	82.0
Cash Flow	-222.7	12.5	33.5	62.0
IRR = 20.2%, NPV = 265.9				

F. Overall Project Results

29. Based on the financial and economic indicators presented above from expected BP examples of the major value chains in Grenada and SVG, it can be concluded that the project implementation is likely to generate a significant impact for the farmers, fishers and aggregators participating in the PA. The underlying assumptions, prices, and technical parameters used for the analysis were based on the prevailing situation and market prices observed in both countries. No adjustments to the market prices were introduced for the economic analysis since no mayor distortions appear to exist that could change significantly the estimated result indicators. However, these results did not take into account all project costs, as those related to the promotion for the development of PAs, the preparation of the business plans, the strengthening of the support services (as the technical assistance provision to beneficiaries), the project management and other delivery costs of the project instruments. These costs (about US$3.85 million) could be treated as public goods rather than costs directly related to the financed business plans. However, they were all included in the overall EFA presented below.

30. Even though the demand driven and competitive approach of the project does not allow to predict in advance the type of subprojects to be supported, it was assumed that 26 subprojects would be financed (14 subprojects in SVG and 12 in Grenada). Among these 26 subprojects, 10 were assumed would come

from the fruits and vegetable subsectors; 3 from the local cocoa and nutmeg farmers' cooperatives for rehabilitating their groves; 2 from each of the cocoa and nutmeg post-harvest handling and processing subsectors; 2 from each of the flower, coconut water bottling, and poultry subsectors; and 3 from the fisheries subsectors. Table 15 show the aggregate financial parameters estimated for the aggregated 26 subprojects.

Table 15 Aggregate Financial Results

FINANCIAL BUDGET (AGGREGATED) (In US$ '000)	hout Project	With Project								
	1 to 15	1	2	3	4	5	6 to 7	8	9	10 to 15
Main Production	20,470	20,470	20,470	27,543	39,435	50,516	60,674	60,674	60,674	60,674
Production Cost										
Investment	-	8,613	4,826	1,870	46	10	-	-	-	-
Operating	17,243	25,998	28,745	35,575	43,358	51,366	52,355	52,355	52,355	52,355
Other Project Delivery Costs	-	770	770	770	770	770	-	-	-	-
OUTFLOWS	17,243	26,768	29,515	36,345	44,128	52,136	52,355	52,355	52,355	52,355
Cash Flow Before Financing	3,371	-6,154	-1,885	3,090	6,389	7,383	8,319	8,319	8,319	8,319
Net Financing 1/	-	23,144	4,243	-411	-2,502	-2,129	-2,031	-2,031	-692	-
Cash Flow After Financing	3,371	16,990	2,358	2,679	3,887	5,254	6,288	6,288	7,627	8,319
Sub-Total Change in Net Worth	-	-16,817	1,308	-	-	-	-	-	-	-
Benefits After Financing	3,371	173	3,666	2,679	3,887	5,254	6,288	6,288	7,627	8,319

IRR = 37.2%, NPV = 22,250.7

1/ Financing Summary	**Without Project**	**With Project**							
Inflows	1 to 15	1	2	3	4	5	6 to 8	9	10 to 15
Grants	-	2,994	1,620	-	-	-	-	-	-
Contribution from own savings	-	16,817	1,308	-	-	-	-	-	-
Disbursements on Long Term Principa	-	4,020	2,698	1,260	-	-	-	-	-
Transfer from Previous Period	1,009	1,009	1,695	2,636	3,502	4,290	4,388	4,388	4,388
Total Inflows	1,009	24,840	7,322	3,896	3,502	4,290	4,388	4,388	4,388
Outflows									
Long Term Repayments	-	-	442	805	1,714	2,031	2,031	692	-
Transfer to Next Period	1,009	1,695	2,636	3,502	4,290	4,388	4,388	4,388	4,388
Total Outflows	1,009	1,695	3,078	4,307	6,004	6,419	6,419	5,081	4,388
Net Financing	-	23,144	4,243	-411	-2,502	-2,129	-2,031	-692	-

31. As seen in the Table, the investments considered for the overall EFA included: (a) subproject investments of about US$15.3 million (of which US$4.6 million would be covered by the project grants, US$7.98 million to be financed by allied local commercial banks, and the rest covered by beneficiaries); and (b) project support and delivery costs of US$3.85 million (in support for preparation of business plans; agricultural services and enabling environment; and project management costs). Overall, the financial rate of return would average 37.2% and the NPV with 6% discount rate would be US$22.25 million. The gross value of production of the beneficiaries in Grenada and SVG would grow from about US$20.47 to US$60.67 million and net revenues from US$3.37 to US$8.32 million.

32. The economic analysis of the aggregate investments show that the expected ERR after all project costs would be 15.9% and the NPV US$13.21 million as shown in Table 16.

Table 16 OECS Regional Agriculture Competitiveness Project

Project Summary ECONOMIC BUDGET (AGGREGATED) (In US$ '000)	Without Project	With Project					
	1 to 15	1	2	3	4	5	6 to 15
Main Production	20,470	20,470	27,543	39,435	50,516	59,520	60,674
Production Cost							
Investment	-	8,626	4,832	1,874	49	12	-
Operating	17,859	26,627	29,561	36,747	44,767	52,844	53,834
Sub-Total Production Cost	17,859	26,627	29,561	36,747	44,767	52,844	53,834
Other Project Delivery Costs	-	770	770	770	770	770	-
OUTFLOWS	17,859	27,397	30,331	37,517	45,537	53,614	53,834
Cash Flow	2,611	-6,927	-2,787	1,917	4,979	5,906	6,840
IRR = 15.9%, NPV = 13,207.69							

G. Sensitivity Analysis

33. One of the risks for a project introducing the PA approach in a country like Grenada or STV characterized by limited capacity and resources, remoteness, susceptibility to natural disasters, vulnerability to external shocks, excessive dependence on international trade, and fragile environments is that investment costs could exceed the budgeted amount due to unforeseen factors. The EFA has shown that if investment costs would be increased in 20%, the ERR would drop from 15.9 to 12.6% and the NPV from US$13.2 to US$9.76 million.

34. Another possibility that could adversely affect the overall project results is that some of the supported Business Plans could perform below expectations and end up failing. If 7 (24%) of the 26 subprojects would be in this situation, and the matching grants involved would be completely lost, then the ERR would be reduced to 12.3% and the NPV to US$5.7 million.

35. Finally, if both adverse situations could happen at the same time (7 subprojects failing and an average 20% of investment costs escalation would affect all subprojects) then the ERR would be reduced to 9.4% and the NPV to US$3.4 million. Based in these results it can be concluded that the proposed project is attractive from the beneficiaries' and country's perspective, and that the results are fairly strong against adverse unexpected circumstances.

ANNEX 4: Climate Co-Benefits, Greenhouse Gas Emissions Analysis and Disaster Risk Screening

COUNTRY: OECS Countries
Agriculture Competitiveness Project

1. **Climate Co-Benefits**. Since the subprojects to be financed through competitive grants under Component 2 are demand-driven, and the activities designed to strengthen the public sector (mainly public sector research and extension services and exporting infrastructure) to be financed under Component 3 cannot be known in advance, a precise assessment of expected climate co-benefits cannot be done prior to approval. However, the project will actively promote and support: (a) under Component 1, intensive awareness raising and the integration of activities supporting increased adaptation to climate change (CC) and climate variability (CV) to business plans; (b) under Component 2, adoption of innovations and realization of investments likely to increase mitigation of greenhouse gases (GHG) emissions, as well as increasing carbon sequestration; and (c) under Component 3, the regulatory reforms and institutional strengthening measures needed to improve the productivity and sustainability of the sector, and the strengthening of the public sector extension services to disseminate new technologies to increase overall resilience in the sector. Based on these basic principles, it is estimated that 56 percent of the investments in Components 1, 2 and 3 (equivalent to around US$4.64 million for both countries) will generate climate co-benefits (adaptation and mitigation). This amount represents about 48 percent of total project cost. Table 2 shows the different activities contributing to adaptation and mitigation, while Table 3 shows the distribution of quantified co-benefits by component.

Table 2: Project activities contributing to climate adaptation and mitigation

Activities with adaptation co-benefits	Activities with mitigation co-benefits
Component 1	
Promote risk awareness and benefits of adaptation.	Promote activities and investments leading to increased mitigation of GHG emissions and carbo sequestration.
Promote integration of activities and management practices in support of adaptation to CC & CV.	Promote agricultural intensification and switch to crops with improved nitrogen use efficiency and less water intensive.
Promote ecosystems to integrate different economic activities and diversify local economies to increase resilience (including crop mixes, resilient varieties, etc.)	Support water pumping using renewable resources.
Promote modernization of irrigation systems to reduce vulnerability and increase water use efficiency	Replace water pumping systems with more energy-efficient pumps and using renewable energy sources.
Component 2	
Promote innovative management practices to restore or increase resilience and strengthen farm-level managerial capacity.	Promote agriculture intensification (on lands already in production), using higher-yielding varieties of seed and increasing carbon sequestration.
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.	Improve irrigation measures to enhance carbon storage in soils through enhanced yields and residue returns.
Adopt and 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.	Replace existing water pumps with more energy-efficient pumps.
Component 3	

Basic research and development, testing, and introduction of practices or techniques more resilient to CC&CV in farming systems.	Conduct research and develop, test, and introduce new or practices or techniques (or scale up existing ones) that reduce greenhouse gas (GHG) emissions in crop production systems.
Research on irrigation management systems better adapted to CC&CV.	Research in sustainable land and water management practices that address land degradation and promote water use efficiency.
Support incorporation of CC&CV into extension services and programs.	Promote activities that support GHG mitigation within crop and fishery (including awareness raising).
Promote CC&CV risk awareness and/or benefits of adaptation and develop systems for information services and improved dissemination for CC&CV adaptation.	Promote sustainable water management.

Table 3: Estimates of investments contributing to climate adaptation and mitigation by component

Components	**Investments (US$ million)**	**Percentage of investments generating co-benefits (percentage)**	**Amount of investments generating co-benefits (US$ million)**
Component 1	0.78	25	0.20
Component 2	6.73	60	4.04
Component 3	0.79	50	0.40
Component 4	1.36	0	0.00
TOTAL	9.66	48	4.64

Grenada and SVG Adaptation and Mitigation Strategies.

2. Similar to other small island developing states, Grenada and SVG's contributions to global CO_2 is minimal. Given the need to protect its fragile environment, Grenada and SVG have signed and ratified several Multilateral Environmental Agreements, including the United Nations Convention on Biological Diversity (UNCBD), the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC). As a Party to the UNFCCC, they have committed to develop, periodically update, publish and make available national inventories of anthropogenic emissions by source and removal by sinks of all Green House Gas (GHG) not controlled by the Montreal Protocol, and measures to facilitate adequate adaptation to the adverse impacts of climate change, which is done via national communications.

3. The results of the 2000 and 2004 inventories in SVG showed that the energy, land use change and forestry (LUCF) and waste sectors contributed to either CO_2 emissions or removal with the energy sector presenting a significant increase in CO_2 emissions. In addition, there was an increase in the net sink of emissions in the LUCF sector due to a slower rate of deforestation and natural regeneration of biomass in managed forests. Generally, there was an increase in net emissions of CO_2 from 1994 to 2004 by about 78% slowing down later. In terms of non-CO_2 emissions, the major source of CH_4 was from landfills in the waste sector, while the major source of N_2O emissions was the agricultural sector, mainly from the use of manure as fertilizer.

4. A mitigation assessment was conducted in 2011 to evaluate the potential impacts of various technologies and practices which could mitigate climate change, while also supporting sustainable development in SVG. The assessment used 2010 as the base year and was done up to 2025 for six sectors: Transport, Residential, Commercial-Tourism, Waste, Agriculture, and Industrial Processes. The results of the baseline scenario projects an overall 65 per cent increase in GHG emissions for the period, or an average annual increase of 3.4 per cent. That is, emissions were projected to rise from 407,199 tons in 2010 to 673,738 tons in 2025. Results from the different sectors for the forecast period indicated that the residential, transport, and commercial – tourism sectors are all projected to have increasing emissions, with commercial – tourism having the fastest growing emissions. On the other hand, the industry, waste, agriculture, forestry, and fishing sectors are all projected to have decreasing emissions.

5. Baseline GHG emissions in the agriculture, forestry and fishing sector are expected to decrease by 5% from 29,319 tons in 2010 to 27,859 tons in 2025 in SVG. Emissions in this sector are generally dominated by enteric fermentation, manure waste management and the application of nitrogen fertilizer which are projected to make up 100 per cent of the emissions in 2025. The reasons being that the 2004 inventory determined LUCF was a sink and the absence of land-use area and forest land-use data for current/recent years hindered estimation for 2025. The data for the period 1994 to 2005 showed a net sink (i.e. net removal of GHGs).

6. The coastal zone was also seen as threatened by climate change since more than 90 per cent of the critical infrastructural development lies on a narrow coastal belt less than eight meters above sea-level. Any disruption at this zone such as storm damage or shoreline inundation would therefore be catastrophic to their economies and social dynamics. Moreover, most of the marine support structures — mangroves and reefs — have been severely affected by higher than normal sea surface temperatures and droughts followed by massive storm surges.

7. Grenada and SVG are shifting their economies towards tourism. This industry interacts with, and is supported by, other sectors such as: energy, health, agriculture, social development, housing and the environment. Thus, the impacts of climate change on tourism are, therefore, the cumulative impacts on these sectors. Hence, the estimated impact of climate change on the tourism product of Grenada and SVG is expected to be strongly negative. Given the sectors' current vulnerabilities, rainfall and temperature were projected through the end of the century. According to the models, mean temperature is expected to increase by 0.15^{0} C per decade over the next century. A similar warming trend was projected for seasonal changes. In addition, the frequency of hot days and nights is also expected to increase by the end of the century while cold days and nights show significant decline, almost reaching non-existence by the 2060s. Furthermore, most models point to a reduction in rainfall with negative median values ranging from 10 per cent to 22 per cent annually by 2090s. They also suggest drying in the wet season from June to November, with the greatest seasonal change seen in the summer months (7.1 per cent per decade). A reduction in the rainy season will significantly affect water availability.

8. Adaptation assessments show that Grenada and SVG are already adapting to the adverse impacts of climate change. Some of the adaptive measures include: (a) soil conservation measures to deal with run-offs, especially on hillside farms; (b) control and restriction of sand mining; (c) a national solid waste management program which prohibits open burning; (d) renewable energy and energy efficient programs in the Hotel sector; and, (e) ground water exploitation and protection of water catchment areas. It is expected to see new areas of adaptation as the need arises. Therefore, it will be imperative to mainstream climate change adaptation into the national development process as it ensures effective adaptation and gives climate change more prominence at the national levels.

9. Grenada has realized the need to take an integrated approach to adaptation by linking local activities with national policies. In 2015, actions taken toward reducing vulnerability and strengthening the resilience of its land and people included development of several initiatives, such as, Grenada's Intended National Development Contributions (INDCs), setting up institutional structures for direct access to the Green Climate Fund, and advancing with the National Adaptation Plan process (also being supported through ICCAS – GIZ implemented components that follows methodology established by GIZ and UNDP through the NAP Global Support Program).

10. The Integrated Climate Change Adaptation Strategies (ICCAS) Program in Grenada aims to increase resilience of vulnerable communities and ecosystems to climate change risks through integrated adaptation approaches. The Program targets both government (including its sectoral agencies), and communities already being impacted by climate change. Implemented by the Environment Unit of the Ministry of Agriculture, Lands, Forestry, Fisheries and Environment, GIZ and the United Nations Development Program (UNDP), the program is funded by the German Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) under its International Climate Initiative (IKI). UNDP-supported program efforts include: (a) increasing the adaptive capacity of communities through the implementation of concrete community-based adaptation activities and incentives in the islands of Grenada, Carriacou and Petite Martinique; (b) strengthening the understanding and awareness of climate change risks and adaptation measures (adaptation plan); and (c) disseminating lessons learned and best practices at the local, national, regional and international levels.

11. Grenada and SVG are among nine countries in the Caribbean to benefit from US$33million which will go toward the financing of sustainable infrastructure projects. The funds are being provided by the *Agence Française de Développement* (AFD), under a Credit Facility Agreement with the Caribbean Development Bank (CDB). The agreement was signed in July 2016 and at least 50% of the funds will be used to fund climate change adaptation and mitigation projects.

World Bank mandate and accounting methodology

12. In its 2012 Environment Strategy, the World Bank adopted a corporate mandate to conduct GHG emissions accounting for investment lending. The quantification of GHG emissions is an important step in managing and ultimately reducing emissions, and is becoming common practice for many international financial institutions. Towards this end, the World Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT) developed by FAO in 2010[12] to assess a project's net carbon-balance. This is the net balance of tons of CO2 equivalent (tCO2-eq) GHGs that were emitted or carbon sequestered as a result of project implementation compared to a "without project" scenario and compared to the initial scenario. EX-ACT categorizes activities in five modules: (a) land use change; (b) crop production; (c) livestock and grassland; (d) land degradation; and (e) inputs and investment. EX-ACT thus estimates the carbon stock changes as well as GHG emissions per unit of land, expressed in tCO2-eq per hectare and year.

Project activities relevant for the analysis.

13. The project implementation period is 6 years, with a capitalization period estimated of 15 years. Dynamics of evolution are assumed to be linear. Default "Tier 1" coefficients for the EX ACT estimation were used. It was assumed that the without-project scenario would be the same as the situation currently

12 *http://www.fao.org/tc/exact/ex-act-home/en/*

observed: no change in the land use practices are expected without the project, while some minor variation is expected with the project implementation.

14. The project will offer demand led support to strengthen value chains in Grenada and SVG. While stakeholders from a wide range of value chains are expected to submit proposals for funding, those with potential to have higher influence affecting the emissions balance are: (a) the fruits and vegetable sectors; (b) the agroforestry sector including the cacao, nutmeg, soursop, golden apple, coconut and other species sectors; (c) the livestock sector (cattle, sheep and goats, pigs and poultry); and (d) the fisheries sector. However, it cannot be identified ex-ante which activities and value chains will be supported, and/or the exact number of beneficiaries that will adopt improved practices or climate-smart agriculture (CSA) approaches. Uncertainty prevails also on whether all farmers who will effectively participate in the project training and support activities will follow the recommendations changing their farming behavior accordingly.

15. The project will only be able to support about 14 subprojects in SVG and 12 in Grenada. Given this limited scope, it is not expected to introduce significant changes in the current land use or production intensity patterns prevailing in the islands. The GHG analysis focused on some of the identified value chains and relied on the evaluator’s estimates as to how many beneficiaries and hectares would be affecting and would be adopting CSA recommended practices. First, it is expected that the cacao, nutmeg, soursop and coconut subsectors will be responding as their production is export oriented offering reasonable positive expectations and economic results. Their business results could be significantly improved by inducing certain post-harvest facilities for better handling and processing stages of the value chain in accordance to buyers’ preferences. The enabling environment to be promoted, together with targeted support for replanting trees with improved seedlings being promoted and produced by the Ministries of Agriculture would induce some reforestation with these species, substituting part of the trees lost by the hurricanes of 2004 and 2005. Second, the vegetable sector is also likely to respond hauled by the domestic tourism demand substituting imports. Third, it is also estimated that the poultry and fisheries subsectors could be the other two sectors that are also likely to respond actively to the project incentives.

16. Grenada and SVG enjoy a tropical climate with an annual mean temperature of 27^0C. Rainfall occurs in a concentric pattern with annual rainfall ranging from 1,700 mm in coastal areas and increasing inward to the central mountain range to about 7,000 mm. However, most of the rainfall occurs on the windward (eastern) side of the central mountain ranges due to orographic uplift. Mean annual rainfall in Grenada is 2,350 mm with variations ranging from 1,500 to 5,000mm per annum, while SVG receives on average 2,190 mm. This pattern makes them among the wetter islands of the Eastern Caribbean showing two distinct rainfall periods - the wet season and the dry season. The wet season occurs from June to November, coinciding with the region‘s hurricane season; lower rainfall is experienced during the dry season which begins in December and ends in May. They receive about 70 per cent of its total annual rainfall during the rainy season with peaks in September to November. It is during this period that the country experiences severe land and coastal erosion from landslides associated with torrential rains and storm surges as a result of tropical waves, depressions, storms or even hurricanes. These islands also suffer infrastructural damage and crop loss due to high winds.

17. The soils of Grenada are dominated by clay loams (84 percent), followed by clays (12 percent) and sandy loams (3 percent). The soils are mostly well drained and reasonably fertile. The combination of high temperatures, high rainfall and reasonably fertile soil in most areas provide the country's land base with considerable potential for productive cropping, but constrained by steep slopes and their proneness to

erosion. The geology of the volcanic soils of St. Vincent are also fertile with the following characteristics: high leaching due to permeability and high rainfall; pH 5; low available P status; variable K and high organic matter content; favorable physical properties and resistance to erosion but the latter is becoming a problem because of management practices encouraging soil loss.

18. With this wet climate and fragile resources, land use is expected to change only marginally. The project is expected to induce only minor increases in areas under trees and tree crops. Cocoa, coffee, nutmeg, coconut, soursop, and other trees species are expected to be replanted with the project incentives since their value chains had traditionally played an important role in Grenada and SVG's economic livelihood. According to qualified informants, these tree species with little strategic support are still offer clear development opportunities that might have renewed impact on returns to farmers, as their trees are rejuvenated and replanted. Enhancing tree cover in old agricultural areas could yield a range of economic and environmental services to local communities, protecting the natural resources by conserving soils, reducing erosion, and enhancing biodiversity. About 200 to 300 farmers in the cocoa, nutmeg and coconut value chains are expected to replant these trees in their farms. Estimates indicate that farmers own on average 3 ha with mixed trees and with the project matching grants they could be doubling the number of productive trees over the project period, resulting in about 10,000 new cocoa, coconut and/or nutmeg trees planted.

19. Improvement in management practices in the vegetables value chains is also expected as a result of the project. The Ministry of Agriculture' technical advisors will work closely with the farmers to introduce small irrigation schemes and ensure correct application of production inputs and sustainable CSA practices, aiming at producing safe and high quality products. Training on CSA will encourage producers to adopt agronomic practices that support them in increasing productivity and crop residues. The improved training opportunities and the introduction of linkages with the demand of quality vegetables is expected to allow about 100 to 150 farmers to enter into PAs within the vegetable value chain, producing tomato, peppers, green beans, onion, eggplant, potatoes or leaf vegetables, and benefiting from the technical advisory service extension agents. It is assumed that the farmers will cultivate on average 1 ha under vegetable cultivation, thus 100 to 150 ha applying these improved agronomic practices, improved water management and nutrient management which are accounted for in EX-ACT.

Results – Net Carbon Balance.

20. *Based on the above assumptions, the Project is a net carbon sink.* The emissions reduction and carbon sequestration potential over a period of 20 years would be about 86,640 tCO2 – equivalent, as shown in Table 1. The balance shows which project activities are expected to contribute most to the net carbon sink: replanting of cocoa, nutmeg and other trees might have the largest mitigation and carbon sequestration potential with 91,767 tCO2-equ while the increase of input use on vegetable production, even improving cropping practices, would increase emissions by about 5,126 tCO2-equ over the without project situation, resulting in a net project balance of 86.540 tCO2-equ.

Table 1: tCO2-equ emission for the without and with project scenario over 20 years period

Project Name	OECS Regional Agriculture		Climate	Tropical (Wet)			
Continent	Central America		Dominant Regional Soil Type	Volcanic Soils			
Components of the project	Gross fluxes Without All GHG in tCO2eq Positive = source / negative = sink	With	Balance	Share per GHG of the Balance All GHG in tCO2eq CO_2 Biomass	Soil	Other	N_2O
Land use changes							
Deforestation	0	0	0	0	0		0
Afforestation	0	0	0	0	0		0
Other LUC	0	-15,497	-15,497	-2,474	-13,055		32
Agriculture							
Annual	0	0	0	0	0		0
Perennial	0	-76,270	-76,270	-74,800	-1,470		0
Rice	0	0	0	0	0		0
Grassland & Livestocks							
Grassland	0	0	0	0	0		0
Livestocks	0	0	0				0
Degradation & Management	0	0	0	0	0		0
Coastal wetlands	0	0	0	0	0		0
Inputs & Investments	959	6,086	5,126			4,426	491
Fishery & Aquaculture	0	0	0			0	0
Total	959	-85,681	**-86,640**	-77,274	-14,525	4,426	523
Per hectare	6	-571	-578	-485.7	-96.8	29.5	3.5
Per hectare per year	0.3	-28.6	-28.9	-24.3	-4.8	1.5	0.2

21. This is a demand-driven project and not all of the expected proposed activities will be implemented. In addition, the project is open to support a range of value chains in the project areas, not only those presented here, which can cause a shift in activities with implications on the net carbon balance. Hence, uncertainty remains not only on the type of activities to be supported, but also on the adoption rate of climate-smart agriculture practices to be supported by the project training. In addition, there may be a time lag in adopting the CSA practices or other innovations which cannot be adequately accounted for in the estimation software EX-ACT, overestimating the positive impact. Finally, the assessment focuses only on the production sector but does not consider upstream activities along the value chain, such as processing or transport to market, electricity and fuel use, and could thus greatly overestimate the achieved net carbon balance.

22. To increase the overall mitigation potential, it is recommendable to focus on activities that increase afforestation and agroforestry activities. As the Project is demand-driven, regular assessments to monitor the Project's mitigation achievements should be conducted.

23. **Climate and Disaster Risk Screening.** The Climate Risk Screening Report established that exposure to the current and future climate and geographical hazards will pose a moderate risk to the project. Generally, both Grenada and Saint Vincent and the Grenadines have been exposed to a number of climate hazards, including hurricanes, floods and storm surges. Given this context, project activities have been designed to explicitly address these vulnerabilities– by providing diversified livelihood alternatives to enhance adaptation and resilience, reduce over dependence on natural resources, and mitigate greenhouse gas (GHG) emissions from agriculture, and other land use. In the absence of these interventions, the exposure to these climate hazards may result in irreversible impact on the agriculture sector, forestry, wildlife and other land use in the project area. Hence, the interventions from the project

are timely to slow down the pace of this impact.

24. Within the project several activities have been designed to contribute for increasing climate adaptation and mitigation co-benefits. The implementation of the Business Plans under Component 2 will increase the productivity and quality of the products, as well as increase their resilience by reducing dependency on rainfall and protect plants from higher temperature. Activities under Component 3 will seek to improve and increase the availability of key inputs required for the adoption of more productive technology (such as quality seeds, seedlings, and planting materials). By strengthening agricultural public extension service providers' capacity and effectiveness to acquire knowledge and skills to support the effective adoption of technology in the implementation of their business plans, the project contributes to assure adaptation and mitigation benefits are fully achieved.

ANNEX 5: IMPLEMENTATION SUPPORT PLAN

COUNTRY: OECS Countries
Agriculture Competitiveness Project

Strategy and Approach for Implementation Support

1. The Project will be the first World Bank-financed project implemented by both countries, Grenada and St. Vincent & the Grenadines. Implementation support for the Project will focus on the functions and activities typically monitored by World Bank task teams during supervision and implementation support missions, including monitoring of technical activities, management functions and fiduciary aspects (administration/accounting, financial management, procurement), and compliance with safeguards policies. In addition, special attention will be directed to ensuring the timely implementation of the risk mitigation measures identified in the SORT matrix. The implementation support strategy is flexible and is likely to be amended during implementation in response to the evolving needs of the Project, including changes in the institutional, environmental or economic contexts.

2. The Implementation Support Strategy includes the following main elements:

(a) World Bank implementation support will begin immediately after Board Approval, to help the Borrowers achieve effectiveness in a timely manner and formally establishing the PIUs in the line ministries and recruiting key staff to strengthen both PCUs and PIUs. The frequency of supervision missions may be higher at the beginning of implementation (possibly up to three per year) to monitor closely the launching of the Project, possibly decreasing to the usual two missions per year after the Project reaches a good implementation pace.

(b) Given the limited experience with World Bank operations training will be provided early on to staff in the PIUs. In addition to carrying out their usual implementation support functions, World Bank fiduciary and safeguards specialists will be available to provide close support and detailed, hands-on guidance to their counterparts during the initial months following effectiveness.

(c) The Implementation Support Strategy will be revisited regularly, taking into account implementation progress and continuous risk assessment.

3. **Technical support.** The Project will support a wide range of activities designed to strengthen the capacity of the national implementing and coordinating agencies to be able to perform their roles effectively. The World Bank task team will include technical specialists with expertise in a range of areas, drawn from within the institution and from specialized consultants with expertise in other areas, as necessary. Field visits will focus on verifying compliance with the policies and procedures spelled out in the Operational Manual, identifying bottlenecks that may be impeding implementation progress, and offering recommendations designed to overcome those bottlenecks. Since the staff in the PIU is expected to have limited previous experience with World Bank-funded projects, the task team is prepared to schedule additional implementation support missions as needed during the first year of implementation.

4. **Technical Assistance Service Provider**. As requested by both governments, FAO will be hired under the project to provide intensive and comprehensive assistance during implementation to beneficiaries in the preparation and implementation of business plans, as well as to the line ministries and executing agencies to strengthen their capacity in the long run.

5. **Fiduciary aspects.** World Bank fiduciary specialists will provide early procurement and financial management support to the PCUs. The World Bank Procurement Specialist is and World Bank Financial Management Specialist assigned to the Project, in addition to joining regular implementation support missions, they will be available to meet with counterparts in the PCUs to provide hands-on support to avoid initial delays in submitting withdrawal applications, performing financial management activities, and processing procurement requests in accordance to Bank's Policies and the Project Operational Manual (POM).

6. **Safeguard compliance.** . Environmental and Social Safeguards Reviews will be carried out as part of every implementation support mission, that is, twice per year on average, by the World Bank Environmental and Social Safeguards Specialists. Specialists, knowledgeable with Bank procedures and safeguards, will be hired by the PCUs to support implementation. The safeguards Bank staff will work with these specialists to review the documents produced and providing additional on-the-job capacity building to the staff of the PCUs and PIUs.

7. **M&E.** There will be a dedicated M&E team within the PIUs responsible for developing, putting in place, and maintaining the Project's decentralized M&E system, which will systematically collect information needed to track progress achieved against the PDO, generate financial information, and document compliance with safeguards policies. Information generated by the M&E systems, complemented by information emerging at the time of the mid-term review, will be used to adjust operational procedures and make any necessary mid-course corrections to the Project implementation modalities. The contract with FAO for the delivery of continued TA will contain activities designed to provide strong technical support in the area of M&E during project implementation and to generate key data related to the progress in executing the activities and quantifying project results and outcomes.

Implementation Support Plan and Resource Requirements

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	Project launching. Establishment/strengthening of coordinating units. Setting up fiduciary processes. Training of staff Hiring TA providers.	Administration and management. Fiduciary management. Communication. TA management.	Three supervision missions and intensive monitoring from HQ. Technical specialists as needed.	FAO as main TA service provider.
12-48 months	Project implementation. Monitoring. Reporting.	Innovation management. Comunication. M&E Fiduciary management.	Two supervision missions and intensive monitoring from HQ. Technical specialists as needed.	FAO as main TA service provider.
Other				

Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task Team Leader	Year 1: 15 staff weeks Year 2-5: 12 staff weeks	Year 1: 3 per year. Years 2-5: 2 per year.	
Agri-business Specialist	8 staff weeks per year	2 per year	
Agricultural Specialist	8 staff weeks per year	2 per year	
Marketing Specialist	6 staff weeks per year		
Procurement Specialist	Year 1-2: 6 staff weeks Year 3-5: 4 staff weeks	2 per year	
FM Specialist	Year 1-2: 6 staff weeks Year 3-5: 4 staff weeks	2 per year	
Environment Specialist	Year 1-2: 6 staff weeks Year 3-5: 4 staff weeks	2 per year	
Social Specialist	Year 1-2: 6 staff weeks Year 3-5: 4 staff weeks	2 per year	

Partners

Name	Institution/Country	Role
Specialists as needed	FAO	In addition to main service provider, it should provide additional expertise to: cover unforeseen requirements and to supervise the delivery of TA.

ANNEX 6: PROJECT MAP