



The World Bank

Climate Resilient and Sustainable Agriculture Project (P172592)

Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 24-Dec-2021 | Report No: PIDA28828



BASIC INFORMATION

A. Basic Project Data

Country Belize	Project ID P172592	Project Name Climate Resilient and Sustainable Agriculture Project	Parent Project ID (if any)
Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date 06-Dec-2021	Estimated Board Date 28-Feb-2022	Practice Area (Lead) Agriculture and Food
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Economic Development	Implementing Agency Ministry of Agriculture, Food Security, and Enterprise (MAFSE)	

Proposed Development Objective(s)

The Project Development Objective is to increase agricultural productivity and the adoption of climate-smart agricultural approaches among project beneficiaries, and to respond effectively to an eligible crisis or emergency.

Components

- Institutional Strengthening
- Investments in Climate-Smart Agriculture
- Project Management, and Monitoring and Evaluation
- Contingent Emergency Response Component (CERC)

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	45.70
Total Financing	45.70
of which IBRD/IDA	25.00
Financing Gap	0.00

DETAILS

World Bank Group Financing



International Bank for Reconstruction and Development (IBRD)	25.00
Non-World Bank Group Financing	
Counterpart Funding	2.50
Local Beneficiaries	2.50
Commercial Financing	18.20
Unguaranteed Commercial Financing	18.20
Environmental and Social Risk Classification	
Moderate	
Decision	
The review did authorize the team to appraise and negotiate	

B. Introduction and Context

Country Context

- Belize is a lower-middle-income country in Central America with close socio-economic and political ties to the wider Caribbean region.** As of 2020, Belize had a population of 421,000, with 55 percent living in rural areas, and a gross domestic product (GDP) of US\$1.7 billion.¹ As a member of the Caribbean Community (CARICOM) economic union, Belize enjoys access to the markets of all other members and benefits from trade agreements established through CARICOM. The national territory is 8,867 square miles, of which 95 percent is on the mainland and the other 5 percent comprises more than 1,060 small islands.
- The Belizean economy relies heavily on the country's natural resource base, which delivers ecosystem services valued at 15–22 percent of GDP.** It features the largest coral reef in the Americas, an extensive mangrove system, and pristine forests that cover 60 percent of the national territory. At the same time, Belize is highly exposed to climate change impacts: increasing temperatures, changing precipitation patterns and more frequent and more severe extreme weather events regularly disrupt agricultural production. Among small states in the 182 countries in the Climate Risk Index², Belize is the third most vulnerable to natural disasters and the fifth most vulnerable to climate change.³ Between 2000 and 2016, nine major storms caused major damage from flooding, including Hurricane Earl in 2016, which resulted in damages assessed at 11 percent of GDP (US\$184 million).⁴
- More than one-half of Belize's population was living in poverty even before the COVID-19 pandemic.** According to the latest poverty data, 52 percent of the population lived below the national

¹ International Monetary Fund: "Belize - Staff Report for the 2021 Article IV Consultation". IMF Country Report No. 21/103.

² Small States' Resilience to Natural Disasters and Climate Change – Role for the IMF. IMF, November 2016

³ International Monetary Fund (2018), "Belize Climate Change Policy Assessment." IMF Country Report No. 18/329.

⁴ World Bank Group (2018), "Advancing Disaster Risk Finance in Belize."



poverty line in 2018, up from 41 percent in 2009.⁵ In the 2009 to 2018 period, there was a sharp rise in urban poverty during (from 28 to 43 percent), driven in part by repeated natural disasters, together with an increase in poverty in rural areas (from 55 to 59 percent). This increase in rural poverty was more significant in the Toledo District (from 60 to 82 percent in the same period), where its economy depends heavily on agriculture. Belizeans of Mayan descent were also much more likely to be poor in 2018 (at 77 percent) than Creoles, Garifuna, Mestizo or other ethnic groups (between 47-52 percent). Moreover, income inequality rose sharply during the 2009-2018 period, with the Gini coefficient increasing from 0.38 to 0.49. Since the COVID-19 pandemic has resulted in an estimated 14 percent decline in GDP in 2020, (in good measure due to impacts on tourism, which provides 40 percent of GDP), it is likely that poverty rates will have increased further since 2018.

4. **Trade facilitation performance.** This performance has improved between 2017 and 2019, mainly in the areas of: simplification and harmonization of documents, automation of border processes, streamlining of procedures, domestic border agency co-operation. Performance in the other areas remains stable. For the group of upper middle-income countries to which Belize belongs, the assessment of the impact of trade facilitation measures - on bilateral trade flows and trade costs - shows that reforms with the greatest benefit are in the areas of formalities, governance and impartiality, information availability, involvement of trade community, advance rulings and fees and charges.

5. Taking into account the potential effects of these policy areas in increasing trade flows and reducing costs, the country's foreign trade would benefit from continued improvements in the following areas: information availability, involvement of trade community, appeal procedures, formalities, automation of formalities, and a simplification of procedures.

Sectoral and Institutional Context

6. **In Belize the agricultural sector accounts for more than 10 percent of GDP and 15 percent of employment.** Around 28,000 individuals (18 percent of the working population) are directly engaged in primary sector employment, which accounts for one-quarter to one-third of all jobs in four of Belize's six Districts. Moreover, agriculture is the country's main source of merchandise export revenue, with food and live animals accounting for 93 percent of merchandise exports in 2019. Sugar, bananas and orange concentrate were the primary merchandise exports, accounting for 65 percent of all exports by value in 2019. The agricultural sector is also critical for the country's nutrition security in a context in which 14 percent of Belizean children under 5 years of age are affected by stunting.

7. **In spite of its importance to the economy, the agricultural sector faces numerous constraints.** With its uneven topography and susceptibility to erosion, 62 percent of the land in Belize is considered only marginally suitable for agriculture. Data from the Belizean Ministry of Agriculture, Food Security, and Enterprise (MAFSE) indicate that of the 10,000 registered farmers in the country, 25 percent were working on farms with less than 5 acres and 57 percent on farms with less than 20 acres. Only one-third of farmers had formal title to the land they cultivated; another 30 percent used land leased by the government, 7 percent rented land and the remaining 30 percent farmed land accessed through informal or communal arrangements. These conditions are part of the reasons for a limited financial sector support for smaller agricultural farms, as lenders focus on larger and medium-sized enterprises with sufficient collateral and proven loan background. Most smaller farm enterprises lack access to formal sources of credit to be able to invest in improving climate resilience at the farm level, while products such as agricultural insurance,

⁵ Statistical Institute of Belize: "Poverty Study 2018-19": <http://sib.org.bz/wp-content/uploads/PovertyStudy2018.pdf>



micro-credit, and micro-insurance are essentially unavailable in financial markets. A further constraint is that Belize has no public irrigation and drainage infrastructure. Although some private irrigation systems (primarily surface water irrigation systems) are used for banana and citrus production, MAFSE estimates that at any given time only 10 percent of agricultural land in production is irrigated, leaving most lands vulnerable to increasingly erratic rainfall. Consequently, Belize relies heavily on food imports, which were equivalent to 68 percent of the value of food exports in 2020.

8. **Belizean agriculture is highly vulnerable to the impacts of climate change.** Climate change is having, and is projected to continue to have, a major impact on crop yields and agricultural incomes. Modeling projections indicate that temperatures could rise by as much as 2.1°C by the 2050s, while average rainfall could decrease by 7- 10 percent, which would severely reduce crop yields. For example, changing weather patterns could result in annual yield losses equivalent to US\$6.7–7.8 million just for rice, maize and beans. Drought devastated the agricultural sector in 2019, when total rainfall was 1,325 mm versus the 1960–2018 average of 2,087 mm, resulting in agricultural losses of US\$38.5 million for Belizean farmers, according to estimates by MAFSE. At the same time, agriculture is the sector (ahead of tourism and housing) that is most disrupted by hurricanes and tropical storms, with hurricanes and storms causing wind- and flood-related damage exceeding US\$232 million in the two decades to 2018, notably in the rice, sugarcane, citrus, and papaya industries. Promoting green and resilient development via climate-smart agriculture is therefore a critical priority for Belize's agricultural sector.

C. Proposed Development Objective(s)

Development Objective(s)

9. **The Project Development Objective is to increase agricultural productivity and the adoption of climate-smart agricultural approaches among project beneficiaries, and to respond effectively to an eligible crisis or emergency.**

Key Results

10. **The results of the Project will be measured via the following PDO indicators:**

- Increase in the yield of crop and livestock products (maize, onions, sweet peppers, beef cattle) produced by targeted beneficiaries (percentage increase), disaggregated by gender;
- Number of beneficiary farmers who have adopted an improved climate-smart agriculture (CSA) technology or practice promoted by the project (number), disaggregated by gender; and
- Increase in land area under sustainable land management practices supported by the project (hectares).

D. Project Description

11. **The Project will be an Investment Project Financing (IPF) with a total estimated cost of US\$45.7 million, including US\$25 million in IBRD financing.** The Project will be implemented over a 5-year period. The Project will provide support to agricultural producers, with a particular emphasis on individual smallholder farmers who are transitioning to more commercial production, while also supporting more established commercial farmers and farmer associations that wish to adopt climate-smart practices to improve the sustainability of their enterprises. In addition, the Project will strengthen the capacity of selected agricultural institutions to assist farmers in adopting CSA approaches.

Proposed Intervention Areas

12. **The Project will target the northern four districts of Belize** (Cayo, Orange Walk, Corozal and



Belize) where the impacts of climate change and climate variability are expected to be stronger on key agricultural products (including maize, vegetables and livestock). These regions receive less rainfall (1,500 mm per annum) than the southern regions of Belize, which receive considerably more rainfall (up to 4,000 mm per annum).

Beneficiaries

13. **The Project aims to benefit an estimated 7,300 beneficiaries directly.** Within this goal of benefitting directly about 7,300 heads of households, about 7,000 will be household farmers (individually or in organizations), representing a total of 29,000 people members of households (6.9 percent of the country's population). In addition, about 220 individuals in public institutions (Component 1) and 80 individuals in participating financial intermediaries (Subcomponent 2.1) will benefit from the capacity building and technical assistance, of whom an estimated 30 percent would be women.

14. **The Project will address some of the gender gaps that exacerbate the challenges that women farmers face.** The time and mobility constraints being faced by women farmers will be taken into consideration for the delivery of training and technical assistance with the objective of addressing gaps in access to financial resources and technology by targeting, as well as targeting at least 30 percent of matching grants to women farmers. To address women's vulnerability to gender-based violence (GBV), the Project will examine whether investments could heighten the risks of GBV and develop strategies to reduce the risks and will finance gender-sensitization training for public and private sector participants. To monitor progress in closing gender gaps, the results framework will include gender-disaggregated indicators for increased productivity, adoption of improved technologies, training of women participants, and for timely responses to GBV-related grievances.

Climate adaptation and mitigation co-benefits

15. **The Project aims to contribute significantly to building climate resilience.** Climate risk mitigation measures are embedded throughout the Project in the form of support for CSA technologies and practices (efficient irrigated agriculture, improved drainage, soil and water conservation, the adoption of drought-resilient crops, and so on). The Project will build the capacity of institutions and communities to respond to climate change, and provide technical and financial support to enhance resilience, while also reducing greenhouse gas emissions from the agriculture sector. The Project will also contribute to climate change mitigation by promoting low-carbon agricultural practices, improved livestock management (more production with lower emissions per production unit), and enhanced water harvesting.

Components

16. **The Project will support the following four components.**

Component 1: Institutional Strengthening (US\$3 million, financed by IBRD)

17. **This component focuses on strengthening the capacity of key public institutions (government agencies and academic organizations) to support a more productive and sustainable agricultural sector.** The component will finance goods, small works, equipment, studies, training, and advisory services to strengthen the capacity of the different departments of the Ministry of Agriculture, Food Security, and Enterprise (MAFSE), the National Meteorological Service (NMS), the Belize Agricultural Health Authority (BAHA), the Pest Control Board (PCB), and the Agriculture Department of the University of Belize, so that they are equipped to support a transition to more resilient, productive, and green agricultural development.



Component 2: Investments in Climate-Smart Agriculture (US\$39.7 million, of which IBRD: US\$19 million; commercial finance from Participating Financial Institutions (PFIs): US\$18.2 million, and farmers: US\$2.5 million)

18. **Subcomponent 2.1: Strengthening the capacity of PFIs, individual farmers and farmer organizations participating in the CRESAP matching grants program in support of CSA investments.** This subcomponent will focus on strengthening the capacity of the main stakeholders, including PFIs, such as the Development Finance Corporation (DFC), Credit Unions, the Credit Union League, and participating Commercial Banks to enhance their knowledge in the new climate smart technologies and approaches promoted by the Project. It will also provide technical assistance to farmers for the preparation of subproject proposals for financing via Subcomponent 2.2.

19. **Subcomponent 2.2: Promotion of CSA technologies and practices via matching grants and leveraging of private capital.** This subcomponent would promote the adoption of tested and properly selected CSA technologies, approaches and practices, with the overarching aim of increasing resilience to climate shocks and weather events, and stabilizing/improving productivity while simultaneously lowering production costs, reducing food losses, and contributing to an increase in profitability. Matching grants to promote the uptake of CSA technologies and practices will be provided via two windows, with 30 percent of grants targeted to women farmers.

20. **Window 1: Smallholder farmers:** The first window will provide matching grants to individual smallholder farmers who are transitioning to commercial production to enable them to adopt climate-smart approaches. These grants will cover up to 60 percent of the investment cost of each sub-project financed, are expected to reach an overall average around US\$3,000 per subproject and not exceeding US\$6,000, covering investment costs, operating and TA costs for smallholder farmers' subprojects. The matching grants will leverage financing from PFIs and smallholder farmers.

21. **Window 2: Commercially oriented farmers and farmer groups.** The second window will provide matching grants to medium and large commercial farmers and to groups of farmers, with a view to supporting larger investments needed to adopt CSA approaches. The grants, covering up to 30 percent of investment cost for subprojects, with an estimated average of US\$ 20,000 per subproject. The matching grants made through the second window will leverage a larger financing share from PFIs and farmers, so the grant element will be reduced compared to Window 1, and beneficiary contributions will be required.

22. **Subcomponent 2.3: Provision of selected strategic collective assets to strengthen resilience.** This subcomponent will finance technical studies, equipment and works to construct selected, collectively used infrastructure that enhances the climate-smart impacts of on-farm CSA investments. Examples include but are not limited to shared drainage infrastructure for low-lying, flood-prone areas (such as those commonly found in northern Belize), and small-scale, collective water-harvesting or land-use assets (where communities are interested in sharing a collective pond, pasture, or similar asset).

Component 3: Project Management, Monitoring and Evaluation (US\$3 million, financed by IBRD)

23. **This component will finance incremental and operating costs, goods and equipment for the Project Implementation Unit (PIU).** It will provide resources to enable the PIU to effectively carry out administrative, fiduciary management, planning, monitoring and evaluation (M&E), and reporting functions; to provide training as needed to PIU staff; and to ensure compliance with all applicable environment and social standards. This component will also finance external audits, as well as a baseline assessment, mid-term evaluation and end-line assessment to document the Project's results and evaluate



its outcomes and impacts.

Component 4: Contingent Emergency Response Component (CERC) (US\$0 million)

24. **The CERC is a contingent financing mechanism which will permit Belize rapid access to World Bank support in the event of an eligible crisis or emergency.** The mechanism for triggering the CERC will be established in the CERC Operations Manual, detailing the applicable fiduciary, environmental and social, monitoring, reporting, and other implementation arrangements required for implementing the activities to be financed. In case of an event triggering the CERC, funds will be reallocated to this component to finance emergency purchases and activities, including goods, works and technical assistance to respond to the emergency. The implementation agency for the CERC will be determined in the CERC Manual.

Legal Operational Policies

Triggered?

Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	Yes

Summary of Assessment of Environmental and Social Risks and Impacts

25. **The Project will rely on water from two international watersheds, namely Rio Hondo River and Belize River, which are considered international waters as defined in OP 7.50.** The Project will not invest in new irrigation schemes fed by river water or alluvial aquifers. None of the project investments will interfere with or affect runoff from surface water sources such as streams or rivers, nor are they expected to adversely affect water quality. An exception to the riparian notification requirement, based on OP 7.50 paragraph 7(a), was approved by the Regional Vice President for Latin America and the Caribbean on September 15, 2021.

26. **OP 7.60 is applicable to the Project because of the longstanding territorial dispute between Belize and Guatemala.** Some parts of the four districts identified as priority areas for infrastructure investments fall within the general area under dispute. In line with OP/BP 7.60, the World Bank has ensured compliance with the requirements of the Policy and notified the Project to Guatemala. Given that the World Bank considers that the execution of the Project is not prejudicial to the interests of Guatemala and that the World Bank does not intend to pass any judgment with regard to the legal status, nor any other status in reference to the territories concerned, and does not intend to prejudge or influence the final decision of the International Court of Justice regarding the claims of Guatemala and Belize, Guatemala has no objection to the Project.

27. **The Environmental and Social Risk Classification (ESRC) under the Bank's Environmental and Social Framework (ESF) is Moderate.** The Project is expected to yield overall positive environmental and social benefits by increasing agricultural productivity and supplying agricultural commodities more reliably in an environmentally and socially sustainable manner. At the same time, project activities will potentially be accompanied by moderate environmental and social risks, depending on the location, type, sensitivity, and scale of project interventions, the nature and magnitude of the potential risks and impacts,



and Borrower capacity and ownership. The Bank documents its due diligence assessment of the Project's potential environmental and social risks in the Environmental and Social Review Summary. All ten Environmental and Social Standards (ESSs) of the ESF are relevant for the Project. The requirements set out in the ESF also apply to the technical assistance activities to be financed under CRESAP.

28. The environmental risk classification is Moderate. The key environmental risks that were identified include: (i) release and management of solid and hazardous waste associated with infrastructure works; (ii) pollution of creeks, rivers, wetlands, and groundwater from pesticides and fertilizers; (iii) nuisance related to noise and air emissions from project interventions, including current agricultural practices such as slash and burn in sugarcane production; (iv) occupational health and safety of workers and supervisors of on-farm works and infrastructure works; and (v) community health and safety from on-farm works, machinery, and infrastructure.

29. The social risk classification is Moderate. The key social risks include: (i) works may result in limited land acquisition and economic displacement, including loss of assets or access to assets from works; (ii) community-level water harvesting structures may require voluntary land donations from farmers; (iii) there are risks in working in remote rural areas, including in indigenous communities; and (iv) child labor is a risk as some traditional Mennonite farmers engage family labor from the ages of 14-16.

30. As the Belize Social Investment Fund (BSIF) has experience working with WB projects and the old safeguards, BSIF will be responsible for environmental and social risk management during CRESAP's entire implementation. To manage this, BSIF will hire one social and one environmental specialist and work in close coordination with the MAFSE Environmental and Social Coordinator. MAFSE has prepared the required environmental and social instruments under the Environmental and Social Framework (ESF) with the help of a consultant. These instruments describe procedures, assessments, mitigation measures, and monitoring actions to ensure that the potential environmental and social risks and impacts are adequately addressed in a manner acceptable to the Bank. In addition, MAFSE's and BSIF's capacity to manage environmental and social risks will be strengthened via (1) training, (2) hiring staff within the PIU with expertise in environmental and social risk assessment and management, and (3) seeking technical support from the Ministry of Sustainable Development, Climate Change and Disaster Risk Management, which has experience in managing Bank projects that apply the old safeguard policies.

31. The BSIF will directly manage all project components and will oversee the PFIs that will channel matching grant resources to recipients under Subcomponent 2.2. As financial institutions in Belize have limited experience and capacity in managing environmental and social risks, the capacity of PFIs will be strengthened by providing support to develop and implement Environmental and Social Management Systems (ESMS), providing targeted and in-depth training under Subcomponent 2.1, facilitating exchanges with PFIs that have experiences in implementing ESMSs, and by tapping into the knowledge and networks of other projects geared toward greening the private sector. The environmental and social instruments that MAFSE is preparing will include descriptions of procedures, assessments, mitigation measures, and monitoring actions to ensure that the potential environmental and social risks and impacts are adequately addressed in a manner acceptable to the Bank.

32. MAFSE has developed a draft Environmental and Social Management Framework (ESMF) that describes the environmental and social procedures for subprojects to follow once the specific locations and the nature of activities are known. In addition to covering Subcomponent 2.3 on collective investments, the ESMF covers Component 4 on the CERC. A draft Stakeholder Engagement Plan (SEP) has



been prepared and includes a grievance mechanism (GM) with a special channel for GBV-related complaints. The Borrower conducted stakeholder consultations and disclosed documented records of stakeholder engagement activities prior to Appraisal. In addition to the ESMF and SEP, MAFSE has conducted consultations and has properly disclosed the following documents prior to Appraisal (to be revised and redisclosed no later than the Effective date of the project): (i) Resettlement Policy Framework (RPF), where complaints will be addressed through the project-level GM described in the SEP; (ii) Labor Management Procedure (LMP), with its GM; and (iii) Indigenous People Planning Framework where complaints will be addressed through the project-level GM described in the SEP. MAFSE will also complete a Social Assessment and an ESMS guideline 90 days after project Effectiveness (dated covenant). The PFIs will prepare/update and adopt an ESMS acceptable to the World Bank prior to disbursing the first funds to beneficiaries under the PFI subprojects. MAFSE, with support from the Bank, has drafted an Environmental and Social Commitment Plan (ESCP) which will be part of the documents to be negotiated and agreed upon with the government of Belize. It sets out risk mitigation measures, actions, and responsible parties required for the Project to achieve compliance with relevant ESSs over a specified timeframe. The Bank will review the ESRC on a regular basis throughout the project life cycle to ensure that it continues to accurately reflect the level of risk the Project presents.

E. Implementation

Institutional and Implementation Arrangements

33. **MAFSE will have overall responsibility for the implementation of CRESAP. Based on recent and ongoing experiences in Belize, MAFSE has opted for the following approach to project implementation:** MAFSE will sign a Subsidiary Agreement with the Belize Social Investment Fund (BSIF)—which has experience with implementing Bank-financed projects—that will assign BSIF technical and fiduciary staff (involved in procurement, FM, accounting, reporting and M&E) and safeguards staff responsibility for these areas during CRESAP's entire implementation period. This BSIF implementation unit will be directly responsible for implementing Component 1, Subcomponents 2.1 and 2.3, Component 3, and Component 4 and will oversee implementation of Subcomponent 2.2 by the Review Committee and PFIs. The PIU will be responsible for the coordination and monitoring of all project activities to ensure comprehensive and seamless monitoring, evaluation, and reporting arrangements for CRESAP. Project funds would be executed by the BSIF implementation unit once the Subsidiary Agreement has been signed. .

CONTACT POINT

World Bank

Soulemane Fofana
Senior Rural Development Specialist

Borrower/Client/Recipient

Ministry of Economic Development
Narda Garcia
CEO



ceo@opm.gov.bz

Implementing Agencies

Ministry of Agriculture, Food Security, and Enterprise (MAFSE)
Servulo Baeza
CEO
ceo@agriculture.gov.bz

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: <http://www.worldbank.org/projects>

APPROVAL

Task Team Leader(s):	Soulemane Fofana
----------------------	------------------

Approved By

Practice Manager/Manager:		
Country Director:	Ricardo Alfredo Habalian	25-Dec-2021