

TC Document

I. Basic Information for TC

▪ Country/Region:	BARBADOS
▪ TC Name:	Support Implementation of Climate-resilient and Sustainable Integrated Coastal Zone Management (ICZM) Public Policy in Barbados
▪ TC Number:	BA-T1109
▪ Team Leader/Members:	Johnson Lynch, Monique Therese Marie (CSD/DRM) Team Leader; Doherty Bigara Rodriguez, Jennifer (CSD/CCS) Alternate Team Leader; Hori, Tsuneki (CSD/RND) Alternate Team Leader; Mendoza Benavente, Horacio (LEG/SGO); Archer-Headley, Janette (CCB/CBA); Leal Rosillo, Roberto (VPS/ESG); Restrepo, Lisa Sofia (CSD/RND); Guerrero Compean, Roberto (CSD/RND); Chavez, Elizabeth (CSD/CSD)
▪ Taxonomy:	Operational Support
▪ Operation Supported by the TC:	BA-L1059
▪ Date of TC Abstract authorization:	14 May 2024
▪ Beneficiary:	Government of Barbados
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	Japan Special Fund(JSF)
▪ IDB Funding Requested:	US\$650,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	April 1, 2025
▪ Types of consultants:	Firms and Individual Consultants
▪ Prepared by Unit:	CSD/DRM-Disaster Risk Management Unit
▪ Unit of Disbursement Responsibility:	CCB/CBA-Country Office Barbados
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	Yes
▪ Alignment to the IDB Group's Institutional Strategy 2024-2030:	(i) Biodiversity, Natural Capital, and Climate Action; (ii) Gender Equality and Inclusion of Diverse Population Groups; (iii) Institutional capacity and rules of law; and (iv) Sustainable, Resilient, and Inclusive Infrastructure.
▪	Diversity; Environmental sustainability; Gender equality; Institutional capacity and rule of law; Social inclusion and equality

II. Description of the Associated Loan

- 2.1 Barbados is the easternmost island country in the Caribbean with a land area of 430 km², an Exclusive Economic Zone (EEZ) of approximately 185,000 km², and a coastline, approximately 97 km long. The natural resources contained within these vast ocean areas, particularly those in coastal zones, provide a variety of services that support human well-being and the tourism industry. More than half of Barbados' population resides within 2 km of the coastline in an urban corridor along the west and south coasts. Coastal areas, particularly the 33 km along the western and southern coasts, serve as the primary location for 95% of the country's tourism activity, attracting more than 1 million visitors a year.
- 2.2 While the coastal zone is critical to the country's socioeconomic activities, it is also a complex and sensitive natural system where land and sea border each other and mutually interact through a range of oceanographic, geomorphic, and biologic

processes. Such processes are principally driven by, but not limited to, waves, tides, currents, sediment transport, erosion, weathering, sea level changes and organic activity. Delicate geography, sensitive ecosystems, urbanization, and continued urban expansion make the coastal areas of the country sensitive to a variety of socio-environmental challenges. In particular, the main challenges facing the country's coastline and exacerbated by changing climate are coral degradation, coastal erosion (both on sandy beaches and harder cliff areas), and coastal flooding.

- 2.3 A public policy framework for balancing climate resilience, environmental protection and restoration, sustainable use of natural resources and socio-economic/industrial development in coastal areas is commonly referred to as Coastal Zone Management (CZM) or Integrated CZM (ICZM). Since the 1980s, the Government of Barbados (GoBA) has made continuous efforts to improve the institutionalization of ICZM. Examples include the establishment of the Coastal Zone Management Unit (CZMU) in 1996 as the implementing agency for public policy on ICZM, and the enactment of the Coastal Zone Management Act (CZM Act) in 1998. Furthermore, after decades of ICZM implementation, especially with the IDB-financed investment projects (e.g., the Coastal Infrastructure Program: BA0019, implemented from 2002 to 2010 with the amount of US\$17 million, and the Coastal Risk Assessment and Management Program BA-L1014, 2011-2020: US\$35 million), the GoBA/CZMU has deepened its coastal engineering and non-engineering knowledge on the design and application of various combinations of measures.
- 2.4 **Challenges.** In the face of increasing coastal climate risks, the GoBA is faced with the need to strengthen the framework for "climate-resilient" ICZM public policies. This includes the need for engineering interventions to reduce climate risks in several critical locations on the west and south coasts, as well as strengthening institutional capacity, including improving the climate risk analysis tool (National Coastal Risk Information and Planning Platform: NCRIPP) and enhancing the capacity to use it in development planning/implementation.
- 2.5 The IDB and the GoBA has signed an agreement in March 2024 for a US\$50 million loan project: Climate Resilient and Sustainable Integrated Coastal Zone Management (BA-L1059). The overall objective of the project is to promote climate-resilient economic development in the country by reducing the climate risk in the coastal zone. The project has three specific objectives: (i) to reduce the risk of coastal erosion and flooding; (ii) to improve the socio-economic value for the tourism industry and local communities in the coastal area; and (iii) to improve the technical capacity and governance necessary to promote climate-resilient ICZM public policies. Key outputs programmed to achieve these objectives include: a range of small-scale coastal infrastructure (e.g. breakwaters and groynes); coastal walkways (e.g., boardwalk) and institutional strengthening-related facilities; equipment; and training. The GoBA has fulfilled the conditions prior to the first disbursement of the project in November 2024 (i.e., the establishment and staffing of the Project Implementation Unit - PIU; the approval and enforcement of the Project Operations Manual - POM; and the establishment and appointment of the members of the Project Steering Committee - PSC). Accordingly, the loan project has reached eligibility and is currently active/disbursing.

III. Objectives and Justification of the TC

- 3.1 The objective of this Non-reimbursable Technical Cooperation (TC) is to provide complimentary technical support activities to the GoBA necessary to increase the

effectiveness of the implementation of the investment loan project: Climate resilient and sustainable Integrated Coastal Zone Management (BA-L1059). In particular, this TC will pursue an approach to conduct the technical activities necessary to address priority issues that could not be included in the project BA-L1059 due to insufficient discussion at the time of project formulation, as well as issues that emerged during the final stages of project formulation. The specific issues are outlined below:

- a) **Public-private partnership (PPP).** PPP in this TC refers to a mechanism or agreement in which the public and private sectors work together to develop infrastructure and provide services that take into account climate risk resilience and sustainable natural resources in coastal areas for the purpose of achieving synergistic effects. There are several examples of the use of PPPs in the climate-resilient ICZM around the world, which can be systematized, among others, as follows (i) the public sector formulates a coastal zone management plan, while the private sector provides technical expertise, financing and implementation; (ii) the private sector invests in facilities in the coastal zone, while the public sector strengthens regulations to ensure natural resource management that takes into account climate risk resilience; and (iii) the public and private sectors work together on comprehensive coastal zone management from the planning stage to development and operation in a given area. In the context of ICZM public policy in Barbados, the discussion on the effective use of PPPs has only just begun, so as a starting point for discussion, a related action plan has been prepared very recently through the Technical Cooperation (TC) project: BA-T1068¹. Based on the action plan, this TC will deepen the discussion on how to utilize PPPs to achieve more effective climate-resilient ICZM public policies in Barbados.
- b) **Natural-based solutions (NbS).** NbS refer in this TC to approaches that aim to achieve coastal climate resilience through the use, protection and restoration of natural resources (such as mangroves and coral reefs). In general, NbS through the implementation of the climate-resilient ICZM public policies is expected to achieve the protection of biodiversity and promoting the participation of local communities in coastal development². The GoBA/CZMU has been discussing the adoption of NbS since the 2000s, and to date, several pilot projects have been implemented, including a coral regeneration pilot project led by the CZMU and the University of the West Indies, Barbados, and a mangrove regeneration project in the East Coast Walker's Reserve (mainly led by the Walkers Institute for Regenerative Research, Education, and Design: WIRRED). To further incorporate NbS initiatives for the effective implementation of ICZM in the future, a related national action plan was created very recently through the TC BA-T1068. As with

¹ The title of the TC: improving Institutional Frameworks for ICZM, National Risk Information Planning Systems and Sustainable Climate-Resilient Coastal Infrastructure

² Examples of climate-resilience ICZM using NbS (particularly for coastal erosion and storm surge protection) using mangrove planting can be seen in Andros, the Bahamas, through the IDB financed project BH-L1043: Climate Resilient Coastal Management and Infrastructure Program.

the PPP mentioned above, this TC will deepen the specific discussion on how to adopt NbS to achieve more sustainable ICZM public policies in Barbados based on the action plan.

- c) **Sea turtle conservation.** This issue was specifically addressed at the Environmental and Social Management (ESM) Stakeholder Consultation Meeting held at the final stage of the BA-L1059 formulation. Naturally, the appropriate protection of all flora and fauna, including sea turtles, must be achieved through the Environmental and Social Management Plan (ESMP) that is being developed as part of BA-L1059. In this sense, this TC will focus on carrying out a series of technical activities necessary to improve the quality of implementation of the management of flora and fauna (in particular, sea turtle protection) through the ESMP.
- d) **Gender and Person with Disability.** The development of Project BA-L1059 incorporates a gender and disability perspective, for example, by adding lighting to the boardwalks to make them more accessible to women at night, and by adding ramps to stairs to make facilities more accessible to wheelchair users. In addition, during the formulation of BA-L1059, it was discussed that there was a potential for economic benefits to women owners (and probably persons with disabilities) of small businesses (such as restaurants) in the neighborhoods as a spillover effect of this project. However, this was difficult to demonstrate and was not included as an indicator to be monitored through the results matrix. This TC, therefore, will focus on a specific review of whether the benefits envisaged in the formulation of BA-L1059 will actually be achieved.

- 3.2 **Sector Knowledge.** The Bank has continuously supported the CZM/ICZM public policy initiatives in Barbados from the 1980s to the present. This includes four loans (BA0048; BA0014; BA0019; and BA-L1014) and four TC projects (TC8101149; BAT1014; BA-T1025; BA-T1068). These past project legacies are carried over from one project to the next, or are continuously used in the next project. For example, the BA-L1059 project was formulated based on engineering designs developed in previous projects such as BA-T1068 and BA-L1014. Beyond these CZM/ICZM initiatives in Barbados, the IDB has additionally accumulated considerable sector knowledge over several decades, including recent loan projects and TCs focused on climate-resilience ICZM (e.g., BH-L1043, BL-L1020, DR-L1154, TT-T1038 and TT-T1117).
- 3.3 **Alignment to the Country Strategy.** This TC and the loan project BA-L1059, which is supported by this TC, aim to promote climate-resilient economic development in the country by reducing the climate risk in the coastal zone, and thus contribute to the IDB Group Country Strategy with Barbados (2019-2023)³: strengthening the regulatory environment for a more open and better business climate, promoting innovation and a greater use of technologies.

³ [IDB Group Country Strategy with Barbados 2019-2023.pdf. Note that the country strategy is effective until 2025.](#)

- 3.4 **Strategic Alignment.** The project is consistent with the IDB Group's Institutional Strategy: Transforming for Scale and Impact (CA-631) and is aligned with its operational focus areas: (i) Biodiversity, Natural Capital, and Climate Action, by reducing the climate risk of the coastal area; (ii) Gender Equality and Inclusion of Diverse Population Groups, by trying to specifically verify the extent to which women and persons with disabilities can benefit from the project BA-L1059; (iii) Institutional capacity and rules of law, by supporting the integration of innovative aspects such as PPP and NbS into Barbados' ICZM public policy; and (iv) Sustainable, Resilient, and Inclusive Infrastructure, naturally by developing climate-resilient and sustainable coastal infrastructure. Additionally, the framework and objectives of this TC are consistent with the regional strategy a) Adaptation to climate change, disaster risk management and resilience of One Caribbean (GN-3201). In addition, they are also consistent with the Line of Action 1: Adapt and build climate resilience of the Bank's Climate Change Sector Framework.
- 3.5 **Alignment to the Japan Enhanced Initiative for Quality Infrastructure, Resilience against Disaster and Health (JEI).** This project aims at climate risk resilience. It is therefore aligned with (a) and (b) of Chapter 3, Section 2 (JEI) of the JEI's Operating Guidance.

IV. Description of activities/components and budget

- 4.1 **Component I: Implementation of complementary technical activities to increase the effectiveness of the implementation of the project BA-L1059 (JEI: US\$600,000).** Activities under this component will include the following:
- a) **PPP (JEI: US\$130,000) and Nbs (JEI: US\$120,000).** The consulting firms will support the following activities for each subject in coordination with GoBA and IDB: (i) disseminate the recently developed relevant Action Plans through the TC BAT1068 to national public and private stakeholders; and select some priority activities from the plan that are considered to be highly effective to implement; (ii) conduct conceptual design, preliminary feasibility studies (or ex-ante cost benefit analysis) for the selected priority activities. Through these, develop a detailed investment project proposal for selected priority activity that are deemed to have a particularly high impact.
 - b) **Sea Turtle Conservation (JEI: US\$300,000).** The consulting firm will carry out the following activities in coordination with GoBA and IDB. These activities should involve local NGOs, academic institutions, and local communities, including: (i) objective diagnostic surveys, e.g., whether sea turtle nests are adequately protected, whether lighting management is adequately implemented, whether school education is adequately implemented, whether awareness activities are adequately implemented, etc.; (ii) formulation of an action plan to improve sea turtle conservation based on the diagnostic survey; (iii) pilot implementation of some priority activities based on the action plan. These include, for example, lighting improvement and management, the tagging and tracking of sea turtle populations and a more detailed understanding of sea turtle ecology in the waters around Barbados; and (iv) capacity building to improve methods for the rescue, treatment and rehabilitation of injured and intercepted sea turtles.

- c) **Gender and Person with Disability (JEI: US\$50,000).** The individual consultants will conduct a specific and quantitative evaluation to verify the extent to which the project BA-L1059 will benefit females and people with disabilities small business owners, including the collection of baseline data and an assessment of whether they are receiving economic benefits after several years of implementation of BA-L1059.

4.2 **Component II: Dissemination and communication of TC results (JEI: US\$50,000).** Products developed under Component 1 will be disseminated through the IDB Knowledge Portal as appropriate. To maximize the impact of dissemination, outreach activities would also be included. It is expected that the results of the project will also benefit other countries implementing similar interventions. Specific activities include hiring consultants to produce knowledge products and communication tools and organizing stakeholder campaigns and other engagement activities.

4.3 **Expected results.** The expected results of this TC are the following:

- a. **Component I:** (i) Proposal for an investment project related to climate-resilient ICZM to be implemented in the future under the PPP framework; (ii) Proposals for NbS-focused investment project to be implemented within the framework of climateresilient ICZM; (iii) Sea turtle conservation diagnosis, action plan, and pilot implementation of priority activities; and (iv) A study to verify whether female and people with disabilities business owners benefit economically from Project BAL1059.
- b. **Component II:** (i) Four final documents (e.g. sector notes) for the dissemination of the various knowledge products developed under Component I; and (ii) Outreach workshops to communicate the results of the TC (one for domestic participants, one online event for international participants).

V. Budget

5.1 The TC will be funded by the Japan Enhanced Initiative for Quality Infrastructure, Resilience against Disaster and Health (JEI) under the Japan Special Fund (JSF) in the Classification of Operation Data on the Bank system (Convergence).

Indicative Budget (US\$)

Activity/Component	Description	JBI Funding	Total Funding
Component I: Implementation of complementary technical activities to increase the effectiveness of the implementation of the project BA-L1059	PPP: US\$130,000 NbS: US\$120,000 Sea Turtle: US\$300,000 Gender/Person with Disability: US\$50,000	600,000	600,000
Component II: Support for the implementation of policy commitments	Editorial support: US\$10,000 National workshops: US\$30,000 Online international workshop: US\$10,000	50,000	50,000
Total		650,000	650,000

VI. Executing agency and execution structure

6.1 The activities included in this TC will require coordination with the private sector (related to PPP), environmental stakeholders (related to NbS), and NGOs and

academic institutions promoting sea turtle conservation. In order to facilitate balanced discussions between these stakeholders with different perspectives and the CZMU, which is in a position to promote ICZM public policies, and to maximize the effectiveness of the TC activities, the Bank will be the executing agency for this TC at the request of the GoBA. This rationale for Bank implementation is consistent with the justification provided in Annex II of OP-619. The main GoBA counterpart is CZMU.

- 6.2 The execution and disbursement period will be 36 months. All procurement activities to be executed under this Technical Cooperation have been included in the Procurement Plan (Annex IV) and will be contracted in compliance with applicable Bank policies and regulations, as follows: (a) Hiring of individual consultants, as established in the regulation on Complementary Workforce (AM-650); and (b) Contracting of services provided by consulting firms in accordance with the Corporate Procurement Policy (GN-2303-33) and its Guidelines. The knowledge products generated from Bank-executed activities within this TC will be the property of the Bank and may be made available to the public under a creative commons license. However, at the request of the beneficiary, in accordance with the provisions of AM-331, the intellectual property of the said products may also be licensed through specific contractual commitments that shall be prepared with the advice of the Legal Department.

VII. Major issues

- 7.1 The activities of this TC are highly dependent on the implementation of the loan project BA-L1059. Therefore, the activities of the TC need to be implemented in an integrated manner with BA-L1059. To mitigate this risk, the CZMU needs to assign a person in the BA-L1059 Project Execution Unit (PEU) to coordinate the implementation of this TC.

VIII. Exceptions to Bank policy

- 8.1 None.

IX. Environmental and Social Aspects

- 9.1 This Technical Cooperation is not intended to finance pre-feasibility or feasibility studies of specific investment projects or environmental and social studies associated with them; therefore, this TC does not have applicable requirements of the Bank's Environmental and Social Policy Framework (ESPF).

Required Annexes:

- Request from the client
- Results Matrix
- Terms of Reference
- Procurement Plan

[Request from the Client_74403.pdf](#)

[Results Matrix_57138.pdf](#)

[Terms of Reference_27567.pdf](#)

[Procurement Plan_73776.pdf](#)