

## TC Document

### I. Basic Information for TC

▪ Country/Region:	BARBADOS
▪ TC Name:	Walkers Reserve Integrated Master Plan and Restoration Pilot
▪ TC Number:	BA-T1059
▪ Team Leader/Members:	Alleng, Gerard P. (CSD/CCS) Líder del Equipo; Anaitee Mills (CSD/CCS); Angel Gomez, Angelo Eduardo (CSD/CCS); Chakalall, Yuri (CSD/RND); Franklin, Rochelle (CCB/CBA); Gomez, Juan Carlos (CSD/CSD); Leyva Munoz, Cesar (CSD/CSD); Negret Garrido, Cesar Andres (LEG/SGO); Padilla, Maria Camila (VPC/FMP); Prado, Veronica Rodrigues Do (INE/ENE); Rajack, Robin Michael (CSD/HUD); Rodriguez Pineda, Mario Vinicio (VPC/FMP); Saavedra, Jose Jorge (CCB/CCB); Watson, Gregory (CSD/CSD)
▪ Taxonomy:	Client Support
▪ Operation Supported by the TC:	N/A
▪ Date of TC Abstract authorization:	21 Jan 2019.
▪ Beneficiary:	Walkers Institute for Regenerative Research Education and Design (WIRRED)
▪ Executing Agency and contact name:	Inter-American Development Bank – Gerard Alleng
▪ Donors providing funding:	OC Strategic Development Program for Sustainability(SUS)
▪ IDB Funding Requested:	US\$650,000.00
▪ Local counterpart funding, if any:	
▪ Disbursement period (which includes Execution period):	30 months
▪ Required start date:	August, 2019
▪ Types of consultants:	Firms and Individuals
▪ Prepared by Unit:	CSD/CCS-Climate Change
▪ Unit of Disbursement Responsibility:	CCB/CBA-Country Office Barbados
▪ TC included in Country Strategy:	Yes
▪ TC included in CPD:	Yes
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality; Productivity and innovation; Environmental sustainability

### II. Objectives and Justification of the TC

- 2.1 Climate change has been described by G20 leaders as the greatest challenge of our time and the Small Island Developing States (SIDS) of the Caribbean are on the frontlines of this climatic onslaught. The effects of these climate impacts have altered our modern understanding of climatic patterns, restructured economies and transformed lives. Latin American and the Caribbean (LAC) countries are comparatively negligible contributors to global greenhouse gas emissions at an average of 12% of total global emissions but this percentage is expected to increase under the existing regional development trends.
- 2.2 Five years after the Paris Agreement, scientists and major studies by the United Nations, indicate that the target of keeping global temperature less than two degrees Celsius above pre-industrial levels is well off-track, leaving LAC particularly

vulnerable to temperature increases, rising sea levels, changes in rainfall patterns and increasingly catastrophic weather events. It is estimated that the economic costs of climate change to the LAC region will be between 1.5% and 5% of its Gross Domestic Product.<sup>1</sup> Additionally, the deforestation of large areas for degenerative agriculture and livestock management, as well as, extractive industries have added to mounting climate change issues in the LAC region. Therefore, the identification and implementation of climate smart and sustainable business models is critical to the development of LAC countries. Thus, developing strategies to create self-sustaining communities is increasingly urgent given the global changing climate under which environmental fluctuations are predicted to intensify. Understanding determinants of resistance, environmental stressors and valuing natural capital, may thus be crucial to restoring stable ecosystems and fostering sustainable development.

- 2.3 Although it represents only 16% of the planet's land, LAC holds 40% of the world's biological diversity and contains seven of the world's 25 biodiversity hotspots, six of the 17 "megadiverse" countries, 11 of the 14 terrestrial biomes, and the second largest reef system worldwide. The Caribbean alone supports an important biodiversity within its diverse terrestrial ecosystems with a high proportion of endemism making the region one of the world's greatest centers of biodiversity. With 26,000 km<sup>2</sup> of coral reefs,<sup>2</sup> the Caribbean region represents 7% of the world's total coral reef ecosystems and includes the second and third barrier reefs in the world (Belize and San Andres Archipelago). More than 30% of the earth's available freshwater and almost 50% of the world's tropical forests are found in the LAC region. It also possesses a vast array of terrestrial, freshwater, coastal, and marine ecosystems containing some of the richest collections of birds, mammals, plants, amphibians, and landscapes on the planet.
- 2.4 This unique source of capital –natural capital, generates important life-supporting benefits for people called ecosystem services.<sup>3</sup> However, this natural capital, and the associated ecosystem services it provides, are not adequately valued in national accounts, so it can be considered by public decisionmakers, and the private sector. It is therefore not preserved, leveraged or utilized efficiently. As countries seek to reach their commitments defined in the Aichi Biodiversity Targets under the Convention on Biological Diversity, their mitigation and adaptation targets under the Paris Climate Accord, and Sustainable Development Goals (SDG) 14 and 15<sup>4</sup>, the sustainable use of natural capital will become vitally important to the achievement of these international commitments and national development strategies, and to secure local livelihoods.
- 2.5 Walkers Reserve<sup>5</sup> is a quarry restoration and regeneration project that is currently under its fourth year of development prior to the quarry's closure in 2021. The project

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<sup>1</sup> UNECLAC, 2014. "The economics of climate change in Latin America and the Caribbean: paradoxes and challenges".

<sup>2</sup> WRI, 2004. "Reef at Risk in the Caribbean".

<sup>3</sup> [IDB Biodiversity and Ecosystem Services Program Document](#).

<sup>4</sup> SDG 14 calls for the conservation and sustainable use of the oceans, and SDG 15 calls for the protection restoration and sustainable use of terrestrial ecosystems and halting and reversing land degradation and biodiversity loss.

<sup>5</sup> Walkers Reserve is located inside the largest silica sand mine in the 430 km<sup>2</sup> (166.0 sq. mi) Small Island Developing State of Barbados. The 227-acre property runs along the Atlantic Coastline within the Walkers Savannah area in the parish of St. Andrews adjacent to the Belleplaine community at the epicenter of the

site has provided sand for construction purposes for the past 50 years and almost every building in Barbados has been built partially with sand from Walker's Quarry. The restoration project is undertaken as part of the sand mining company's corporate social responsibility (CSR) and it has demonstrated a holistic approach to the design and implementation of climate smart strategies that address several issues simultaneously. Over a period of six years, through the work of the now formalized WIRRED<sup>6</sup> and the CSR of the private mining entity, Walkers Reserve has been transitioning from active sand quarry to thriving food forest. In switching from the business as usual approach, WIRRED has developed: (i) a model for regeneration for extractive industries; (ii) a hub for climate smart innovation, research and conservation; (iii) an education center for environmental stewardship and conservation; (iv) a scalable permaculture agriculture model; and (v) a viable tourism and hospitality business product, all whilst generating livelihood opportunities for the vulnerable rural community of Belleplaine.

- 2.6 The purpose of this operation is to support the mainstreaming of natural capital and biodiversity within Barbados, to make the economic case for ecosystem service benefits through quarry restoration and to provide an example of successful quarry restoration practices that can be replicated in the LAC region. The project will support innovations championed by a private sector company in order to develop new financial and business models to conserve, value, price, and trade natural capital that enhance and protect the underlying natural assets.
- 2.7 The main objective is to develop an integrated master plan for the rehabilitation and end of use plan of Walkers Quarry while piloting sustainable interventions to restore its environmental state. The program will be designed to take a comprehensive approach to environmental sustainability, climate change adaptation and mitigation, disaster risk management and natural conservation. Given the strategically important location of Walkers Reserve, the master plan will include components to value the potential of recreational and cultural activities, sustainable agriculture, food markets, tourism and commercial opportunities for community development and resilience.
- 2.8 This operation is consistent with the Update to the Institutional Strategy 2010-2020 (AB-3008) and is aligned with development challenges of: (i) productivity and innovation as it promotes the involvement of the private sector in sustainable development through the design of new business models for the conservation and commercialization of natural capital; and (ii) social inclusion and equality as it addresses economic impacts of climate change adaptation and mitigation. The operation is also aligned with the cross-cutting theme of climate change and environmental sustainability as it ultimately aims at the transformation of a mining facility into a hub where, through sustainable practices, natural capital and vital ecosystems will regain their natural resilience and produce commodities that can be

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Barbados National Park. The sand mining entity has been providing this essential construction aggregate for the last 50 years.

<sup>6</sup> The Walkers Institute for Regenerative Research Education and Design (WIRRED) was created as a non-profit climate change agency tasked with the documenting, continuing, scaling and sharing of the climate innovative work being done at Walkers Reserve. The institute is focused on climate adaptation and resilience, renewable energy supply and distribution, regenerative agriculture and food security, land regeneration, water quality and access, oceans, soils and freshwater systems, marine and terrestrial biodiversity, local and international eco-agritourism, community development and livelihood generation, human health and well-being, and youth and technological innovation.

part of sustainable value chains. Additionally, the TC is aligned with the IDB Integrated Strategy for Climate Change Adaptation and Mitigation (GN-2609-1) and its Action Plan (GN-2609-3), as well as with the Barbados Country Strategy (2019-2023), particularly with its objective to “improve the efficiency of public services in the priority area of integrated coastal zone management and climate resilience” (GN-2948). The project is aligned with the Corporate Results Framework (CRF) as it contributes to indicator N° 11 of the Country Development Results Indicators of the CRF: “Beneficiaries of improved management and sustainable use of natural capital”. The TC also targets the commitments made in April 2016 by the Boards of Governors of the IDB and IIC to increase the volume of climate-related financing to 30 percent of operational approvals by the end of 2020 and to access external sources of concessional financing and contributes to the objectives of the Strategic Development Program for Sustainability (SUS - OC Fund), GN-2819-1, as it relates to the mobilization of financial resources for climate change mitigation and adaptation.

### **III. Description of Activities/Components and Budget**

- 3.1 Component 1. Develop a comprehensive Integrated Master Plan (IMP) for the Walkers Reserve (US\$250,000).** This component will develop an IMP for the reserve with the purpose of providing guidance on the most appropriate and sustainable land use that will inform the high-level strategic planning work to be undertaken. The plan will comprise the following stages: (i) site investigation including inventory of existing conditions, current uses, existing ecology and natural capital assets, and stakeholder mapping; (ii) analysis and diagnostic of potential restoration interventions including baseline assessments, market and financial analysis; and (iii) prioritization and action plan for the implementation of the IMP. The analyses and assessments on each of the stages will inform the identification of a broad list of potential uses and associated economic values. The masterplan will include a team of specialized experts with the purpose of evaluating the potential uses and economic viability of the site and will include expertise in permaculture, landscape regeneration, biodiversity preservation, conservation, and water resources management among others.
- 3.2 Component 2. Sustainability pilot project (US\$280,000).** A pilot project will be implemented focusing on the efficient management of water resources on site in order to build a resilient water management program. Key interventions include: (i) hydrogeological study of the Walkers Reserve landscape including current and future climate trends. The application of the IDB Hydro-Bid water management tool will be utilized where possible in the simulation of basin hydrology under different climate scenarios; (ii) a comprehensive water audit of the current operations of Walkers Reserve and a forecast of future water resource demands for all proposed future activities; and (iii) a sustainable water resource management plan, tools and strategies inclusive of water budgets and best practices for water quality and quantity for the reserve. These interventions are anticipated to potentially involve the existing dune and savannah restoration efforts, waste management, renewable energy generation for water infrastructure and WIRRED’s environmental training programs.
- 3.3 Component 3. Development of a Global Communications Strategy (US\$120,000).** This component will support the development and implementation of a Global Communications Strategy with a special focus on promoting Walkers Reserve as a Regional HUB for landscape restoration. The strategy will cover

internal and external communications from a global perspective to successfully export the restoration case throughout the region. A consultant will be hired to help implement the strategy. Outputs from this component include the development of a technical knowledge product to present the economic analysis of Walkers' restoration and its implications for better policy decision-making, as well as an electronic booklet on Ecosystem Services Assessment and valuation work. [The Walkers Reserve website](#) will be used as a platform for the implementation of the communications strategy.

- 3.4 The operation will be funded with resources from the Strategic Development Program for Sustainability Fund (SUS – OC Fund).

**Indicative Budget (US\$)**

Component	IDB Funding	Local Counterpart	Total
1. Development of a comprehensive masterplan	250,000	0	250,000
2. Pilot implementation on sustainable practices.	280,000	0	280,000
3. Global Communications Strategy	120,000	0	120,000
<b>Total</b>	<b>650,000</b>	<b>0</b>	<b>650,000</b>

#### **IV. Executing Agency and Execution Structure**

- 4.1 The Inter-American Development Bank and WIRRED have agreed that the [executing agency](#) will be the IDB through its Climate Change Division (CSD/CCS) given that this is the first type of operation with the Bank and WIRRED does not have the operational capacity to execute a program of this type at this stage. In addition, the proposed pilot implementation activities, the innovative nature of the project and the need to ensure that there are broad opportunities for replicability within Barbados as well as in other countries in the region. A Project Steering Committee will be set up and will initially comprise IDB specialists as well as members of Walkers Reserve and other relevant stakeholders. A successful implementation during this first phase of the project's development will require specific knowledge and experience in the preparation of the specialized terms of reference, technical coordination of the consultancies and the review of the expected products in close collaboration with the client.
- 4.2 CSD/CCS will be in charge of all the required internal and external coordination, the administrative tasks and the technical supervision, and will be responsible for the delivery and quality of the products. Supervision of this TC will be the responsibility of the Project Team Leader assigned by CSD/CCS, with the support of the Chief of Operations in the IDB's country office in Barbados and the assigned Operations Analyst. The Country Office Barbados will be the Unit of Disbursement Responsibility. Both the execution and disbursement periods have been established to be 30 months.
- 4.3 The IDB will follow its procurement policies and guidelines related to hiring processes: (i) individual consultants will be hired in accordance with the guidelines set out in policy AM-650; (ii) consulting firms of an intellectual nature only will be hired in accordance with the "Policy for the Selection and Contracting of Consulting Firms for Bank-executed Operational Work" (GN-2765-1) and its related Operational Guidelines (OP-1155-4).

## **V. Major Issues**

- 5.1 Government of Barbados' regulatory approvals could be delayed or denied: To mitigate this risk, Walkers Reserve has already been included as part of the Physical Development Planning Act 2017 for Barbados (Draft). Additionally, local governmental agencies in the development of the plan have been actively consulted. Furthermore, the outputs of the spatial development plan will match the inputs as stipulated by the Town and Country Planning Act (CAP. 240), the Physical Development Planning Act 2003, the Physical Development Planning Act 2017 (Draft) and the Tourism Development Act (CAP. 341.2).
- 5.2 Multi-agency input could be required: Component 1 will require the input of several entities from the Government of Barbados. To mitigate this risk throughout the master planning process the relevant governmental departments and agencies will be included in stakeholder consultations, ensuring frequent and effective communication to maintain cooperation.
- 5.3 Availability of subject matter experts: The project has multiple elements that require the input of several specialized subject matter experts in the initial stage of the financial and technical assessments that will inform the selection and implementation of the pilot phase. To mitigate this risk, CSD/CCS will ensure that the relevant terms of reference are clearly articulated and WIRRED is engaged in the development of the profiles of such technical experts.

## **VI. Exceptions to Bank policy**

- 6.1 No exceptions to Bank policies are envisioned for this TC.

## **VII. Environmental and Social Strategy**

- 7.1 Given the nature of the project, there are no associated environmental or social risks. Per to the Environment and Safeguards Compliance Policy of the Bank (OP-703), the operation has been classified as "Category C", which means that no environmental assessment studies or consultations are required (see [Safeguard Policy Filter](#) and [Safeguard Screening Form](#)).

### **Required Annexes**

[Request from the Client - BA-T1059](#)

[Results Matrix - BA-T1059](#)

[Terms of Reference - BA-T1059](#)

[Procurement Plan - BA-T1059](#)