TC ABSTRACT

I. Basic project data

▪ Country/Region:	Barbados
▪ TC Name:	Capacity Building for Ecosystem Services Valuation and Best Practices Dissemination
▪ TC Number:	BA-T1025
▪ Team Leader/Members:	Team leader – Rogers, Cassandra (RND/CBA); Alternate team leader – Lemay, Michele (INE/RND); Archer-Headley (CCB/CBA); Restrepo, Lisa Sofia (INE/RND); Alleng, Gerard (INE/CCS), Gromko, Duncan (INE/RND), Nuenninghoff, Sybille (RND/CBL)
▪ Indicate if: Operational Support, Client Support, or Research & Dissemination.	Operational Support
▪ If Operational Support TC, give number and name of Operation Supported by the TC:	BA-L1014
▪ Reference to Request: (IDB docs #)	N/A
▪ Date of TC Abstract:	February 2013
▪ Beneficiary:	Government of Barbados
▪ Executing Agency and contact name	IDB
▪ IDB Funding Requested:	US$500,000
▪ Local counterpart funding, if any:	US$50,000 in-kind
▪ Disbursement period (which includes execution period):	24 months
▪ Required start date:	April, 2013
▪ Types of consultants (firm or individual consultants):	Firm
▪ Prepared by Unit:	INE/RND
▪ Unit of Disbursement Responsibility:	INE/RND
▪ Included in Country Strategy (y/n); ▪ TC included in CPD (y/n):	N/A
▪ GCI-9 Sector Priority:	Climate change (mitigation: carbon sequestration and adaptation: coastal erosion control from biodiversity and ecosystem services), poverty reduction and social equality, and the Biodiversity and Ecosystem Services Initiative.

II. Objective and Justification

The coastal zone of Barbados is the country's main economic asset, as the tourism industry accounted for 39% of Gross Domestic Product (GDP), 50% of total export earnings, and 44% of employment in 2008. However, combination of storms, climate change, and lack of resources means that coastal zones are uniquely vulnerable. A Bank study on Disaster Risk and Risk Management found that there is a 10%

likelihood of a catastrophic event (with losses of US$423 million, 11% of GDP) happening in the next ten years.

The Bank and the Government of Barbados (GOBA) have already taken a number of steps to address this threat, including a coastal zone management program in 1983, a Bank-approved Coastal Conservation Program (856/OC-BA) in 1994, and the establishment of the Barbados Coastal Zone Management (CZM) Unit in 1996. In 2002, the Bank provided further support through the Coastal Infrastructure Program (1386/OC-BA). Most recently, the Bank has approved BA-L1014, which has three components: coastal risk assessment, monitoring, and management; coastal infrastructure; and institutional sustainability for the Integrated Coastal Risk Management (ICRM). This TC has been designed to build on this work and to support the implementation of BA-L1014. Component three of BA-L1014 calls for the updating of the CZM plan, incorporating disaster risk reduction (DRR) and climate change adaptation (CCA), institutional capacity building, risk modeling and assessment, and the implementation of a communication strategy.

The TC will support the GOBA as it incorporates spatial planning and ecosystem service valuation into its CZM strategy. The TC will (a) build capacity for the use of a spatial tool that analyzes disaster risk and climate change adaptation and informs the CZM plan and (b) document and disseminate best practices, including climate-resilient coastal management, in coastal planning. The tool will evaluate a number of ecosystem services, including: coastal stabilization, flood protection, water quality control, recreational services, and provisioning services such as fisheries. The tool will allow the GOBA to evaluate a number of spatially explicit alternative coastal development scenarios. Threats, such as erosion and natural disasters, should be considered in the context of the changing climate in Barbados. Thus far, Barbados's climate change adaptation strategy has focused on the use of "grey" infrastructure; the tool should also include ecosystem-based adaptation strategies. Experience and best practices in developing this innovative CZM approach will be disseminated.

The proposed TC will contribute to the following GCI-9 lending program priority targets: (i) poverty reduction and social equity, as the TC and resulting CZM will help protect livelihoods of low-income populations; (ii) climate change initiative, as the TC will focus on biodiversity and ecosystem services specifically related to climate change mitigation and adaption (i.e., carbon sequestration, coastal erosion control, and climate change impacts on agriculture); and (iii) the Biodiversity and Ecosystem Services Initiative, as the TC will enable planning based on ecosystem services modeling and disseminate best practices.

III. Description of activities

The proposed activities are described in the following table. Expected outputs and results are fully consistent with the IDB's Biodiversity Initiative, specifically its objective of strengthening and fostering environmental governance.[1]

ACTIVITY	DESCRIPTION	EXPECTED OUTPUTS	EXPECTED RESULTS
COMPONENT 1 : Activities			
1.1 Spatial tool	Development of a spatial tool that maps		

[1] http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37250949

development	ecosystem services of Barbados, including: coastal stabilization, flood protection, water quality control, recreational services, and provisioning services such as fisheries. Includes collection of economic data to enable valuation analysis and the creation of alternative coastal development scenarios (e.g. disaster risk management and climate change adaptation scenarios).	1 spatial analysis tool, modeling of alternative coastal development scenarios	Strengthening coastal zone management and capacity to respond to coastal vulnerability
1.2 Capacity building and workshops	Capacity building of relevant GOBA officials will take place over the course of the development of the tool; this will ensure that the GOBA plays an important role in designing the tool to suit its needs. Additionally, upon completion of the tool, 2 workshops will be conducted to further enhance capacity. As the spatial tool is meant to inform the GOBA's CZM, the results of the analysis will be communicated to relevant officials in the Unit.	10 people trained, integration of spatial planning into CZM	
COMPONENT 2 : Dissemination of best practices			
2.1 Dissemination of best practices	Lessons learned and best practices from the implementation of this TC will be disseminated via: an economic, social, and environmental impact evaluation of climate-resilient coastal infrastructure; a comparative study on best practices and lessons learned; and an international conference on coastal planning, hazard resilience, and economic development in Small Island Developing States (SIDS).	1 impact evaluation, 1 comparative study, 1 international conference	

IV. Budget

The total budget for this technical cooperation has been estimated in US $500,000 as shown in the following table.

Indicative Budget

Activity/Component	Description	IDB/Fund Funding US$	Counterpart Funding	Total Funding US$
COMPONENT 1 : Activities				
1.1 Spatial tool development	Development of a spatial tool that maps ecosystem services of Barbados, including: coastal stabilization, flood protection, water quality control, recreational services, and provisioning services such as fisheries. Includes collection of economic data to enable valuation analysis and the creation of alternative coastal development scenarios (e.g. disaster risk management and climate change adaptation scenarios).			
1.2 Capacity	Capacity building of relevant GOBA			

building and workshops	officials will take place over the course of the development of the tool; this will ensure that the GOBA plays an important role in designing the tool to suit its needs. Additionally, upon completion of the tool, 2 workshops will be conducted to further enhance capacity. As the spatial tool is meant to inform the GOBA's CZM, the results of the analysis will be communicated to relevant officials in the Unit.			
COMPONENT 2 : Dissemination of best practices				
2.1 Dissemination of best practices	Lessons learned and best practices from the implementation of this TC will be disseminated via: an economic, social, and environmental impact evaluation of climate-resilient coastal infrastructure; a comparative study on best practices and lessons learned; and an international conference on coastal planning, hazard resilience, and economic development in Small Island Developing States (SIDS). Research Assistant for 12 months	48,000+		48,000+
TOTAL		**US$500,000**		**US$500,000**

V. Executing agency and execution structure

The IDB is the executing agency for the TC. Execution will be managed jointly by RND/CBA and INE/RND. Development of the spatial tool and capacity building will be implemented by an outside contractor (InVEST) with expertise in ecosystem services valuation and spatial tool analysis. Production of reports and presentations will be the joint responsibility of the IDB, GOBA, and implementing organization.

VI. Project Risks and issues

The risk exists of a lack of familiarity with ecosystem services valuation and spatial analysis as a method for informing coastal planning; the analysis techniques planned for this TC are relatively new. This risk will be mitigated by careful coordination between the contracted implementing agency and the GOBA and additional capacity building as necessary.

VII. Environmental and Social Classification

It is not anticipated that the activities to be financed in this TC will have negative direct or indirect social or environmental effects. Therefore the team considers that, according to the Bank's Safeguards Screening Toolkit, this operation should be given a classification of "C": (i) no environmental or social risks; (ii) direct contribution to solve an environmental issue.