



Demonstration of a Caribbean Mechanism Toward Establishment of a SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub

Part I: Project Information

GEF ID

10992

Project Type

MSP

Type of Trust Fund

GET

CBIT/NGI

CBIT **No**

NGI **No**

Project Title

Demonstration of a Caribbean Mechanism Toward Establishment of a SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub

Countries

Regional, Barbados, Grenada

Agency(ies)

UNEP

Other Executing Partner(s)

University of the West Indies (UWI), Cave Hill Campus

Executing Partner Type

Others

GEF Focal Area

Land Degradation

Taxonomy

Land Degradation Neutrality, Land Degradation, Land Productivity, International Waters, SIDS : Small Island Dev States, Biomes, Coral Reefs, Constructed Wetlands, Seagrasses, Mangrove, Focal Areas, Marine Protected Area, Pollution, Plastics, Nutrient pollution from Wastewater, Nutrient pollution from all sectors except wastewater, Chemicals and Waste, Best Available Technology / Best Environmental Practices, Sound Management of chemicals and waste, Waste Management, Hazardous Waste Management, Biodiversity,

Mainstreaming, Tourism, Agriculture and agrobiodiversity, Climate Change, Climate Change Adaptation, Small Island Developing States, Climate resilience, Sustainable Land Management, Integrated and Cross-sectoral approach, Income Generating Activities, Ecosystem Approach, Sustainable Livelihoods, Community-Based Natural Resource Management, Sustainable Agriculture, Influencing models, Transform policy and regulatory environments, Demonstrate innovative approach, Strengthen institutional capacity and decision-making, Stakeholders, Beneficiaries, Local Communities, Communications, Education, Behavior change, Public Campaigns, Awareness Raising, Type of Engagement, Consultation, Information Dissemination, Participation, Partnership, Private Sector, SMEs, Individuals/Entrepreneurs, Civil Society, Non-Governmental Organization, Community Based Organization, Academia, Gender Equality, Gender results areas, Capacity Development, Knowledge Generation and Exchange, Gender Mainstreaming, Women groups, Gender-sensitive indicators, Sex-disaggregated indicators, Capacity, Knowledge and Research, Innovation, Learning, Theory of change, Knowledge Generation, Knowledge Exchange

Sector

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 1

Duration

36 In Months

Agency Fee(\$)

168,766.00

Submission Date

5/30/2022

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
LD-2-5	GET	1,776,484.00	3,025,100.00
Total Project Cost (\$)		1,776,484.00	3,025,100.00

B. Indicative Project description summary

Project Objective

To enhance knowledge uptake and application within academia and communities of policy and technical practice in SIDS by implementing a systematic approach for extraction and translation of green-blue knowledge elements generated by GEF projects.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
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Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 1: Establishment of a SIDS-SIDS Green-Blue Environmental Knowledge Transfer Hub as a formalized mechanism	Technical Assistance	<p>1.1: An institutional coordinated operational KM Hub mechanism for extraction of knowledge from Caribbean GEF implemented projects, approved by participant governments and their partners.</p> <p><i>Indicators: (i) Number of signed cooperation agreements /MOUs by partner organizations</i></p>	<p>1.1.1 SIDS-SIDS Green-Blue Knowledge Transfer Hub (KTH) and ICT solution for evaluation and endorsement of lead partners</p> <p>1.1.2. Institutional Cooperation Agreements for operationalisation of the SIDS-SIDS Green-Blue Knowledge Transfer Hub with partner agencies signed by partner organizations</p> <p>1.1.3. SIDS Green-Blue Economy Knowledge Network Nodes for the strengthening of inter- and intra-regional cooperation between SIDS</p>	GET	484,496.00	800,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
<p>Component 2: Development of a demonstration model for extracting learning from GEF Projects into Green-Blue learning curricula formats for sectoral application</p>	<p>Technical Assistance</p>	<p>2.1: Knowledge integrating green-blue learning elements extracted from GEF projects, effectively demonstrated and applied in selected educational institutions and sectors.</p>	<p>2.1.1 Methodology and system for analysis of and extraction of Green-Blue learning elements developed from GEF projects implemented in CSIDS for evaluation by KT Hub partners</p>	<p>GET</p>	<p>807,493.00</p>	<p>1,500,000.00</p>
		<p><i>Indicators: (i) Gender-sensitive rating assessment/appraisal scores provided by reviewers and stakeholders on tools, quality of curricula, demonstrated efficacy of KT Hub model</i></p>	<p>2.1.2 Pilot curricula set/learning elements extracted from GEF projects (on sector-based environmentally sound and innovative technologies and policy instruments) designed for multiple delivery platforms for evaluation by KT Hub partners</p>			
			<p>2.1.3 Pilot phase delivery of curricula/learning elements tested, evaluated and validated by target learners and users (students, professionals) and KT Hub partners</p>			

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 3: Enhancement of sustainability and scale-up	Technical Assistance	<p>3.1: Mainstreaming of knowledge generated by GEF projects and scale-up applied within the work of national and regional partners, sharing of lessons learned and peer to peer exchange.</p> <p><i>Indicators: (i) number of signature events convened; (ii) number of policies, business plans and professionals integrating the knowledge in their respective areas</i></p>	<p>3.1.1 Marketing, Outreach and Communication Strategy and accompanying suite of knowledge products for uptake by target stakeholders</p> <p>3.1.2 Green-Blue Solutions Marketplace Event and Replication Strategy to sustain promotion of innovation generated by GEF Projects via the KT Hub in CSIDS and global SIDS</p> <p>3.1.3 Project monitoring and evaluation system</p>	GET	322,997.00	425,100.00
				Sub Total (\$)	1,614,986.00	2,725,100.00
Project Management Cost (PMC)						
			GET	161,498.00	300,000.00	
			Sub Total(\$)	161,498.00	300,000.00	

Project Management Cost (PMC)

Total Project Cost(\$)

1,776,484.00

3,025,100.00

Please provide justification

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Government of Barbados	In-kind	Recurrent expenditures	300,000.00
Recipient Country Government	Government of Grenada	In-kind	Recurrent expenditures	150,000.00
Other	University of the West Indies (UWI), Cave Hill Campus, Barbados	In-kind	Recurrent expenditures	705,100.00
Other	Partnership on Action for green Economy (PAGE) Secretariat	In-kind	Recurrent expenditures	250,000.00
Other	Caribbean Development Bank (CDB)	In-kind	Recurrent expenditures	750,000.00
Other	Caribbean Community Secretariat (CARICOM)	In-kind	Recurrent expenditures	100,000.00
Other	Organization of Eastern Caribbean States (OECS)	In-kind	Recurrent expenditures	50,000.00
Other	Foundation for Research Innovation Enterprise Entrepreneurship Training and Development in the OECS (FRIEETAD)	In-kind	Recurrent expenditures	20,000.00
Other	Partnership Initiative on Sustainable Land Management (PISLM)	In-kind	Recurrent expenditures	100,000.00
Other	United Nations Institute for Training and Research (UNITAR)	In-kind	Recurrent expenditures	300,000.00

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Donor Agency	United Nations Industrial and Development Organisation (UNIDO) through the Centre for Renewable Energy and Energy Efficiency Centre and the Barbados BLOOM Clean Tech Cluster	In-kind	Recurrent expenditures	300,000.00
Total Project Cost(\$)				3,025,100.00

Describe how any "Investment Mobilized" was identified

Not Applicable

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNEP	GET	Grenada	Land Degradation	LD STAR Allocation	258,973	24,602	283,575.00
UNEP	GET	Regional	Land Degradation	LD Global/Regional Set-Aside	1,517,511	144,164	1,661,675.00
Total GEF Resources(\$)					1,776,484.00	168,766.00	1,945,250.00

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount (\$)

50,000

PPG Agency Fee (\$)

4,750

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNEP	GET	Grenada	Land Degradation	LD STAR Allocation	15,000	1,425	16,425.00
UNEP	GET	Regional	Land Degradation	LD Global/Regional Set-Aside	35,000	3,325	38,325.00
Total Project Costs(\$)					50,000.00	4,750.00	54,750.00

Core Indicators

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	5,000			
Male	5,000			
Total	10000	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment: 10,000; 50% female, 50% male; representing (i) academia/KM institutions, (ii) practitioners/resource users; private sector, communities (iii) national govt technical, policy professionals

Part II. Project Justification

1a. Project Description

1. The Global Environmental Problem, Root Causes and Barriers that Need to be Addressed:

The SIDS context: land resource degradation and the global environmental problem: According to Agenda 21[1]¹ Small Island Developing States (SIDS) and islands supporting small communities are a special case both for environment and development. They are ecologically fragile and vulnerable. Their small size, limited resources, geographic dispersion and isolation from markets, place them at a disadvantage economically and prevent economies of scale. Because small island development options are limited, there are special challenges to planning for and implementing sustainable development and therefore will be constrained in meeting these challenges without the cooperation and assistance of the international community.[2]² Further, Agenda 21 recommends that SIDS should develop and strengthen inter-island, regional and interregional cooperation and information exchange. Further, pursuant to *Chapter XIV. Human Resource Development* of the *Programme of Action on the Sustainable Development of Small Island developing States* adopted by the international community in 1994 (commonly referred to as the *Barbados Programme of Action* (BPOA))[3]³ concludes that it is a matter of high priority to strengthen national educational and training mechanisms in order to facilitate the flow of information on sustainable development issues, enhance public awareness of the environment and encourage participation in the implementation of effective solutions.[4]⁴ One of the strategies highlighted in the BPOA to achieve this objective is to infuse sustainable development ideas into education curricula at all levels and promote participation by all groups, emphasizing the link between environment and social and economic issues[5]⁵. In this regard, the international community is encouraged to support efforts to develop curricula for sustainable development, in particular tertiary level courses on environmental management and sustainable development, encouraging multidisciplinary approaches.[6]⁶

In addition, the *SIDS Accelerated Modalities of Action Pathway* (commonly referred to as the SAMOA Pathway)[7]⁷ calls for the establishment of national and regional information and communications technology platforms and information dissemination hubs in small island developing States.[8]⁸ This is

further elaborated by calls for the strengthening educational and training mechanism(s) of national and regional information and communications technology platforms and information dissemination hubs in small island developing States to facilitate information exchange and cooperation, building on existing information and communications platforms.[9]⁹

This proposed initiative is *advanced under the overarching theme of addressing land degradation and achieving land degradation neutrality (LDN)*, given that locally driven anthropocentric influences in SIDS have most direct and significant impact on terrestrial landscapes, on account of the small spatial scales that in turn can result in loss of global environmental benefits (GEBs) over relatively very short time spans. The loss or impairment of ecosystem services associated with land and coastal degradation presents complex, interlinked challenges on small islands, where biodiversity is impacted by land use and land use change, land productivity and water resources (fresh and coastal) are compromised by direct land degradation and chemical/waste pollution loading, and landscapes are rendered more prone to accelerated degradation under changing climate, that predisposes communities to heightened risk of life and property loss in the face of extreme events. Over the past decades, Caribbean SIDS and global SIDS have amassed, and have access to, a vast reservoir of knowledge and experiences generated by a myriad of project and programme initiatives to address sustainable land and associated inter-linked resource management, considering the close 'ridge-to-reef' nexus between land and coastal areas. However, translation of this knowledge into sustained and effective 'greener' or 'bluer' solutions/practice by resource users, private sector and communities to build economically and socially resilient livelihoods remains low. This proposed initiative therefore presents an approach via a *SIDS Knowledge Hub mechanism* demonstrated for the Caribbean, to better harness knowledge and green-blue solutions particularly from GEF initiatives to improve long-term sustainability in uptake, application and replication by practitioners, that will ultimately result in improved land and coastal resource management, with the generation of GEBs.

Threats: Under the frameworks of the Barbados Programme of Action and the SAMOA Pathway, Caribbean Small Island Developing States (CSIDS), through obligations under the various multi-lateral environmental agreements, treaties and cooperation frameworks, donor support interventions and national mandates, have been addressing the declining state of biodiversity, climate, land and soil health, ocean health, freshwater resources, fisheries, and the presence of hazardous chemicals that are well-manifested in their impacts in degrading global environmental benefits in the region.

Land degradation impacts terrestrial landscapes across Caribbean countries to varying degrees, characterized by forest resource overexploitation and degradation, unsustainable agricultural practices, unplanned and/or poorly planned urbanization and poor quarrying practice. The extent and severity of land degradation is heightened in mountainous interiors of the islands, that are typically subjected to

extreme rainfall events. Land degradation in productive agricultural landscapes is exacerbated by improper and inefficient use of fertilizers and other agro-chemicals that pollutes ground and surface waters and adjacent coastal waters[10]¹⁰. Quantification of soil losses from landscapes of Caribbean islands has not been systematically and comprehensively assessed, however, UNEP's *Cartagena Convention State of the Convention Area (SOCAR) Assessment of Marine Pollution from Land-based Sources and Activities in the Wider Caribbean Region Report (2019)*[11]¹¹ notes that turbidity observations made in coastal waters, reflective of sediment runoff, generally shows increases outside the acceptable range in the wet season in response to higher erosive rainfall which in turn are related to changes in human population density (Chollett et al., 2017). Associated with inputs of sediments in coastal waters is the contamination of sediments with toxic chemicals. UNEP SOCAR Report (2019) reported that a wide variety of metals and organic substances, such as polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), heavy metals, and pesticides, are discharged into coastal waters from urban, agricultural, and industrial sources. These contaminants adsorb onto suspended particles and eventually accumulate in depositional basins (FAO, 2017)[12]¹². It is estimated that in the SIDS of the Caribbean, and Latin America, land degradation costs an estimated US\$ 4 800 million dollars annually, and impacts approximately 125 million people within the region (UNEP, 2006)[13]¹³.

These environmental and natural resource issues are likely to be exacerbated by climate change. A clear manifestation of this is the occurrence of drought events particularly in years with El Niño Southern Oscillation (ENSO)[14]¹⁴ events. The drought of 2015-2017 was particularly severe, as well, affected approximately 200,000 families (1 million people) in Haiti, especially in Sud-Est, Nord-Ouest and Artibonite regions. Expensive, desalinated water resources account for as much as 70 percent of drinking water in Antigua and Barbuda. Even in Guyana, a country renowned for its water resources, the damage from the 1997/1998 drought was estimated to be approximately US\$ 29 million due to decreased outputs in the agricultural sector; rice production decreasing by 37 percent and sugar by 7 percent and 40 percent in the mining sector as result of the unavailability or limited sources of water. Hence the mainstreaming of mainstreaming climate resilience is a national priority for all Caribbean Small Island Developing States. While these countries have not contributed significantly to causing global climate change, they are, nevertheless at the forefront with respect to the adverse impacts of climate change. Cadogan (2021)[15]¹⁵ noted that climate change modelling studies have predicted that changes in rainfall patterns and temperature regimes will continue to affect the freshwater availability in the Caribbean if carbon dioxide and greenhouse gas emission continue unabated. In the Caribbean this will be manifested in impacts to groundwater, crop management, flooding, landslides, pollution, among others. In the Caribbean it has been observed that due to the onset of climate change there has

been a decrease in stream flow and groundwater recharge rates in many water-stressed countries. The impacts of climate change such as re-occurring drought, intense rain and storm events accelerate land degradation and increases the risk of occurrence of natural disasters.

The report *The State of Biodiversity in The Caribbean Community* notes that the ecosystems of the Caribbean provide critical support to the development and well-being of the diverse population of 20 million people living in one of the global biodiversity hotspots. However, this hotspot is threatened by the effects of habitat destruction, pollution, invasive alien species and climate variability[16]¹⁶. According to the *Ecosystem Profile of The Caribbean Islands Biodiversity Hotspot* (2019)[17]¹⁷, the total land surface of the Caribbean Islands Hotspot is only 230,000 km² however with just around 10% of the hotspot's original habitat remaining, most of the major habitat loss has already occurred. The remaining landscapes continue to be modified in response to population growth and demands and that habitats remain at risk from human activity and natural disasters. In percentage terms, amphibians and reptiles are among the most threatened of the taxonomic groups assessed, at 73 and 31 percent respectively. The Caribbean Sea is biologically significant; it has the highest marine species richness in the Atlantic Ocean, represents two of the 34 identified biodiversity hotspots (Myers et al. 2000) and is considered the 'high-diversity heart' of the Tropical West Atlantic, itself one of four global centres of tropical marine biodiversity (Robertson and Cramer 2014).

The report *Marine Pollution in the Caribbean: Not a Minute to Waste* (2019)[18]¹⁸ underscores that the wider global problem of marine pollution is also ubiquitous in Caribbean waters and constitutes a serious threat to the Blue Economy. Pollution, including marine litter, plastics, sewage, oil and chemicals, impacts the value of the goods and services provided by the oceans, including quality of fisheries and the pristine marine environment highly valued by the tourism sector. The region is extremely vulnerable to the impacts of marine pollution due to the dependence of its people on natural resources in combination with its vast exposed coastlines. On average, about 85 percent of wastewater in the Wider Caribbean Region (WCR) goes untreated into the ocean. Studies have measured the concentration of plastic litter across the Caribbean and found as many as 200,000 pieces of plastic per square kilometer in the northeastern Caribbean. A snapshot for some selected countries featured in the report, shows that an average of 2,014 litter items per kilometer were found on beaches and coastal areas as compared to a global average of 573. Wastewater and agricultural runoff are significant sources of nutrient pollution loading while industrial activities and shipping are sources of hydrocarbon pollution.

The COVID-19 Pandemic challenge in CSIDS: Compounding the environmental threats has been the devastating fallout from the COVID-19 pandemic. Emerging data reveals the extent of the fallout, with the global economy contracting an estimated 3.5% in 2020 (IMF, 2021) and global extreme poverty increasing for the first time in over two decades (UNDP, 2020). Widespread business closures, extensive job losses, and deep recessions were among some of the immediate economic effects (World Bank, 2020a). Beyond economic impact, COVID-19 has exposed and, in some cases, exacerbated underlying social and environmental issues. These challenges have spurred calls to 'build back better' from political, corporate, and academic actor. The impact of the pandemic was significant on the economies of the Caribbean, including those of Barbados and Grenada which created extreme economic hardship. The pandemic disrupted the tourism industry, which accounts for over 45% of GDP of these countries, given that the sector employs significant proportions of the country's workforces. In the case of Barbados, the economy is estimated to have contracted by about 18 per cent in 2020 and in Grenada by about 13%. The pandemic is expected to have major prolonged impact on the recovery efforts of both Barbados and Grenada.

The devastating impacts of the COVID-19 pandemic on countries' economies worldwide, have underscored the need for a sustainable Green-Blue post-COVID 19 economic recovery. It is essential to accelerate environmental and climate action through innovative mechanisms that foster sustainable use of natural resources that support local livelihoods and maintain the integrity of the natural environment.[19]¹⁹ For the Caribbean, a key strategy that needs to be deployed to guide post-pandemic recovery, is to draw on the wide body of knowledge generated by the numerous project and programme initiatives on environmental management implemented in CSIDS, with the view of extracting relevant and impactful Green-blue knowledge elements; learning approaches which have been successfully employed and upscaled with beneficial results; innovative technologies and solutions which have resulted in fundamental policy changes to influence behavioural change; solutions that mitigate further risk from the impacts of infectious diseases similar to COVID-19, and expand emerging opportunities for investment, all with the view of integrating them into future project and programme development. Notwithstanding the high interest and recognized need in CSIDS to embrace green-blue growth strategies to sustain strong economic growth, against the backdrop of enhancing climatic resilience and environmental sustainability with poverty reduction and social inclusion, there has been no enduring and systematic means to extract and transform Green-Blue learning elements from projects and programmes into mainstreamed practice at both technical and policy level. This has been true to varying degrees in contribution of the GEF partnership support to the Caribbean region based on findings of the GEF's Independent Evaluation Office.

Challenge of transitioning Green-Blue economy knowledge to support post-COVID-19 Response: In consideration of the extreme vulnerabilities of CSIDS and associated economic and livelihood losses due to gathering climate change impacts, loss of biodiversity, pollution and land degradation, and more

recently, with the coupling of the extreme fallout from the COVID-19 pandemic, CSIDS must continue to aggressively pursue a development agenda that builds resilience. A key pillar to building this resilience is enhancing the capacity of public sector policy makers and technical facilitators, private sector, communities of practice and wider civil society to effectively adopt and apply green-blue knowledge and tools that have been amassed through the myriad of programme and project interventions not only in CSIDS, but in the global SIDS community. This is particularly relevant against the backdrop that CSIDS are characterized by limited institutional capacities among agencies with lead mandates for sustainable development; hence emphasis on strengthening capacity needs to continue in the direction of broadening the sustainable development agenda to include partners in the academic community, NGOs and CSOs so that they have the appropriate capacities to be knowledge brokers and teachers with the aim of achieving behavior change that enhances resilience of green-blue economies, and safeguard environmental benefits from regional to global levels.

It should be noted that well before the COVID-19 pandemic, this fundamental challenge of the inability to routinely transition knowledge gained toward systematic implementation of green solutions was recognized by the Government of Barbados, informed in its Green Economy Scoping Study^[20]²⁰ which among its numerous recommendations, made call for the establishment of a *SIDS-SIDS Knowledge Transfer Platform of Green Economy Policies and Practices*.^[21]²¹ The United Nations Institute for Training and Research (UNITAR), one of the five UN agencies participating in the Partnership for Action on Green Economy (PAGE)-Barbados Programme, undertook a feasibility study of the SIDS-SIDS Green-Blue Economy Knowledge Hub within a wider scope of supporting Barbados' objectives to integrate inclusive green-blue economy goals and targets into SDG-aligned national economic and development planning. The effort aimed to implement evidence-based sectoral and thematic reforms in line with inclusive green-blue economy priorities, to strengthen capacities at the national level and to improve the inclusive green-blue economy knowledge base.

The concept of the Green-Blue SIDS Knowledge Hub is not new, as it has been embedded in the various international agreed instruments on the sustainable development of SIDS, namely, the Barbados Programme of Action (BPOA), the Mauritius Strategy for the Further Implementation of the BPOA (MS/BPOA) and the SAMOA Pathway. Further, the *XXII Meeting of the Forum of Ministers for the Environment for Latin America and the Caribbean* hosted by the Government of Barbados in February 2021 recognising the importance of the need for a Transfer Knowledge Hub, pursuant to its Decision 8 on the *Environmental Dimension of the Sustainable Development of Small Island Developing States (SIDS)*, called for the development of a Caribbean SIDS COVID-19 Recovery Response to address issues relevant to the economic health of Caribbean SIDS, including the establishment of a regional modality or institutional mechanism in Caribbean SIDS, in the form of a

SIDS cooperation and knowledge hub preferably within a regional university, with the view of enhancing knowledge transfer and use among SIDS[22]²².

Challenge of ineffective knowledge uptake and application from the GEF project partnership:

Caribbean SIDS have benefited over the past 30 years from the implementation of GEF-supported investments intended to contribute to the preservation of global environment benefits based on conservation and sustainable use of natural resources in the Caribbean region. Notwithstanding these investments, most countries in the Caribbean remain at a relatively low ability to effectively transform the contributions of the suite of projects into mainstreamed adoption into practice among practitioners both in the public and private sectors particularly in the hospitality and agricultural industries, that are now the basis of Caribbean economies. This is mainly because project investments tend to be managed within a short-term planning ?project-by-project? execution modality within management of the executing agency, without a wider ?permanent? institutional framework that may serve as a knowledge repository with the critical function of creating a learning environment for sustained uptake and implementation of best practice among practitioners and civil society at large. As a consequence, there tends to be no or limited inter-project learning; no well-defined protocol to extract from the various interventions, the green-blue learning components including, *inter alia*, environmentally sound and innovative technologies and policy instruments.

The University of the West Indies, notwithstanding its regional mandate (with campuses in Jamaica, Trinidad and Tobago, Barbados and Antigua and Barbuda), and position as the premiere centre of excellence for higher education in in CSIDS in the English-speaking Caribbean, tends to have limited sustained uptake of GEF learnings within the university, limiting its potential role to advancing the catalytic work of the GEF. Overall, this results in the learnings of the GEF not being systematically mainstreamed into the curricula of the university and that of affiliate centres of excellence. This constitutes a **long-range problem** in that countries will not attain positions to fully maximize opportunities to build needed responses to address challenges in maintaining integrity of ecosystem services and creating the opportunities to build a more robust, diversified green-blue economy. This can be extended to the context of realizing integrated green-blue and sustainable COVID-19 recovery efforts, where otherwise relevant information may not be easily accessible to aid with needed accelerated transformational change. This represents a lost opportunity to capitalize on the regional university network that has not only a highly relevant mandate, but also has the inherent capability to help address this gap. However, without sufficient attention paid to connecting the university community to the GEF Partnership in a systematic way, green-blue leaning elements from the projects remain not sufficiently integrated into the curricula of the regional university system, constituting not only a serious knowledge gap but an impediment to sustainability and continuity of practice and replication of lessons learned. In summary; (i) the lack of access to knowledge on successful, evidence-proven applications of green-blue learning elements implemented through GEF projects in

CSIDS means that countries will be unable to utilize that knowledge in the post-COVID-19 Green-Blue Recovery, notwithstanding there is global consensus that the best response of building-back-better is via a Green-Blue and Sustainable Recovery approach and (ii) the absence of a methodology and system for documenting successfully implemented green-blue solutions through GEF project investments, a situation that if allowed to persist, would mean that neither CSIDS, nor the GEF, would be reaping maximum benefits of these investments.

The *long-term solution* in the context of the GEF Partnership in the Caribbean, is to put in place an institutional *SIDS-SIDS Knowledge Transfer Hub Mechanism* via strong, well-established academic nodes, to ultimately facilitate SIDS in delivering Global Environmental Benefits (GEBs) and maintaining the health of the environment through the extraction of knowledge and learning in a systematic manner, including, *inter-alia*; environmentally sound and innovative technologies, green-blue approaches and climate resilient methods and tools. The success and lessons from this project that seeks to demonstrate a 'proof-of concept' for knowledge management, are intended to be scaled-up to a wider global SIDS level under the GEF-8 replenishment to include the Pacific and the Atlantic, Indian Ocean and South China Sea (AIS) SIDS.

The approach proposed in this project builds on the GEF's Response to COVID-19[23]²³, in particular, its proposed medium term actions which focuses on development of an internal blueprint on how to deploy ongoing and upcoming projects that can help lay the foundation for a green-blue recovery which emphasizes the identification and integration of the risks and opportunities linked to COVID-19 and an examination of how the crisis is affecting strategic platforms of engagement on themes such as food security, cities, mining and the circular economy. It also builds on the GEF's long term vision to further promote systems change thinking in the strategies to guide GEF's upcoming 8th replenishment cycle[24]²⁴ which provides an opportunity to explore lasting solutions to addressing the fallout from the current COVID-19 pandemic and mitigating the threat of potential future emergence of zoonotic diseases that could be unleashed from forest ecosystem reservoirs that are subjected to degradation and human interaction. Support from the GEF will contribute to accelerating transformational change to the human systems, including, *inter-alia*; in particular to food, and production and consumption, while ensuring a balance between the use of natural systems and human systems.

Barriers: The project seeks to address three (3) key barriers in the realization of a regional SIDS-SIDS knowledge management hub that will better harness knowledge and green-blue solutions particularly from GEF initiatives to improve long-term sustainability in uptake, application and replication by practitioners, that will ultimately result in improved land, coastal and natural resource management, with the generation of GEBs, in alignment with the proposed project component areas;

(1) Lack of a systematic, coordinated institutional-level approach and means to ensure that knowledge generated from GEF projects implemented in CSIDS can be extracted and transformed to usable Green-Blue learning opportunities, (2) Lack of a demonstrable model and associated methodology for systematic extraction of green-blue learning resources from GEF projects in curricula development and effective delivery means to users, and (3) Limited awareness and operational knowledge to support effective dissemination of Green-Blue tools and approaches and their application.

Barrier 1: Lack of a systematic, coordinated institutional-level approach and means to ensure that knowledge generated from GEF projects implemented in CSIDS can be extracted and transformed to usable Green-Blue learning opportunities. In general, there is no *well-defined standing cooperation framework* between the University of the West Indies and organizations serving as implementing and executing agencies for GEF projects to efficiently facilitate knowledge uptake by UWI for transformation to learning resources. In projects where roles have been defined for the university as a partner, the cooperation framework tends to be limited to reviews and technical inputs from university experts in the relevant subject areas over the project duration. It should be noted however that this has not necessarily been the case for projects where the university was designated as Executing Agency; exceptions include projects including, for example, the Regional Biosafety, for which the University of the West Indies, St. Augustine Campus, Trinidad and Tobago served as the Executing Agency. Cooperation tends to be ad-hoc on a project-by-project basis. In GEF project design there is often *no tangible sustainable linkage made between the longer-term utilization of the knowledge products supported through an institutional home*. This is notwithstanding that all GEF projects are required to specify the modality for development of knowledge products and how these products may be used post-project. The general assumption applied is that the knowledge products will be utilized during the course of project implementation, thereafter, mainstreamed within the beneficiary organizations and utilized in code of practice. The result is that *knowledge management remains fragmented and confined to operational context within the projects themselves while active*. Invariably this results in the *university remaining uncommitted to forging deeper and sustainable linkages with the GEF partnership* in the region; the national GEF Operational Focal Points, the GEF Implementing Agencies and the project Executing Agencies. The University has advanced ICT capabilities to support its on-campus and open campus programme offerings, but this *ITC capability has not been evolved toward interface with the project learning opportunities* with particular relevance to the GEF project delivery in the Caribbean. The underpinning problem in post-project application and continued learning is the fact that when the project resources have been expended there are usually *limited to no financial provisions for continued support*. Across the GEF partnership in the Caribbean there has not been definition of a sustainable model that can assure continuity in terms of stable financial stream to keep knowledge products under active use and further development, a process that can be best maintained within the university tertiary education framework.

Barrier 2: Lack of a demonstrable model and associated methodology for systematic extraction of green-blue learning resources from GEF projects in curricula development and effective delivery means to users. Following the contributory elements outlined above that result in Barrier 1, to date,

there has been a *no coordinated efforts to devise an approach methodology and system for analysis of and extraction of Green-Blue learning elements* from GEF projects. Since the mode of engagement of UWI in many GEF projects has been limited to the narrow purview of the individual projects, the potential wider and more integrative learning and knowledge management process across projects has not been developed to any degree of full potential. The result is that UWI continues to develop its curricula based on normative approaches meaning that *opportunities to learn from ?live? GEF project knowledge capture and demonstration do not feed into the process of curricula development* at the university. This in turn results in *limited opportunity to test concepts advanced in GEF projects*. The UWI has been widely considered as a hub for extension of knowledge to practitioners in governments and other stakeholder groups through affiliated programmes. However, without an established system to extract green-blue learning elements from existing project and programme interventions being undertaken in CSIDS, including GEF investments, in place, *continued curricula development and rollout processes will not capture the suite of innovative approach and technologies contained therein*.

The GEF partnership recognizes the importance of ensuring that knowledge products are easily accessible to users and make impact that drives behavior. However, there is a *lack of tailoring potential learning content from projects to current and popular dissemination platforms* that are widely used today, particularly social media, that is quickly becoming among the preferred means of accessing information among younger learners. Another factor that limits investment in sustained knowledge transfer is the fact that even within GEF implementing agencies, there is often *inadequate opportunity for technical specialists/staff to access or engage in capacity building using tools and methods learned from projects* in structured learning settings as part of organizational skills development, for onward support to governments and stakeholders. This means that there is little incentive to build on learning opportunity if specialists are not engaged in routine feedback and validation; a process that the university may be adept in facilitating. The opportunity of translation of best practice and knowledge experience from the GEF project portfolio in the region sees relatively *limited translation into a sustained pathway for transferring knowledge gained from projects that can feed and inform policy and technical aspects of multilateral environmental agreement negotiations*. Expert knowledge provided through project contributions (via consultancy reports, technical notes, guidance notes and best practice protocols) are usually not available in ready-usable formats for negotiators as a means of integrating knowledge from science to policy. Addressing this gap, facilitated university academia will greatly assist the work of the CARICOM and OECS Secretariat in negotiating arenas.

Barrier 3: Limited awareness and operational knowledge to support effective dissemination of Green-Blue tools and approaches and their application. Notwithstanding there is global consensus that a green (and blue) sustainable post-COVID-19 recovery is necessary and desirable, a major constraint mitigating against this, is limited operational knowledge on the green-blue tools and approaches available to practitioners across sectors to facilitate this. This is further exacerbated by the *absence of sustainable means to network and exchange information, experiences and practices as well as limited platforms* for stakeholder engagement and interaction. There are a number of constraining factors

related to the project context and how knowledge is disseminated. A significant factor is that there tends to be very *limited tracking on uptake and application of tools beyond the life of the projects* due in large measure to inadequacy of sustained communication and stakeholder engagement post-project. Where good practice from project learning is indeed being applied, there tends to be rather *limited visibility and promotion particularly beyond the life of the project*. It follows that there is *inadequate means of assessing utility and application* of these tools. An important related consideration is the *inability to transfer knowledge across socio-cultural contexts* where there may be opportunity; in many cases *language translation is often a limitation*. In general, beneficiaries and partners are sensitized to solicit engagement during project execution in accordance with project-based communications and stakeholder engagement plans. Once the project closes the assumption is that communications and awareness-raising will become part of the work of the project executing agency, but this *communications and awareness-raising is often not sustained post-project due to resource constraints*. This reality will likely persist among local partner organizations; however this deficit could be possibly addressed through the university-led partnership with coordinated *inter-project* learning opportunities. *Communication approaches across the GEF project partnership in the Caribbean region are often disjointed* and the projects could benefit from a more consistent strategic approach that could be facilitated by an institutional knowledge hub that provides a reference for communications and outreach. This hub can help synergize and amplify the work and reach of other existing knowledge platforms that are available. Finally, there is *limited profiling at major events of effective application of knowledge acquired* through GEF projects in SIDS. There is need to maintain the spotlight on SIDS in development agendas given their inherent vulnerabilities, however there are *low capacities in maintaining presence in global arenas* that would otherwise allow for building new and maintaining existing support networks. Marketplace-type events are important avenues to exchange knowledge, broker collaborations and raise resources, however SIDS are often poorly featured and represented.

2. The Baseline Scenario and Any Associated Baseline Projects

The baseline below presents a synopsis of efforts in enhancing SIDS green-blue knowledge management and application relevant to this project; from the national level in the context of the core project countries, Barbados and Grenada, to the regional level and the wider global level.

Baseline National level ? Barbados: Knowledge management related to environment and sustainable development has been initially underpinned at a policy level by the 2004 *Barbados National Sustainable Development Policy (NSDP)* that outlines the national principles of sustainable development. The NSDP calls for a change in attitude, behaviour and values by all persons, corporations and decision-makers. The lynch-pin of this policy is that the primary development objective in Barbados ought to be the optimization of quality of life for present and future generations, while ensuring that economic growth and development is not achieved at the expense of our ecological

capital. In this regard, the Government, in partnership with civil society, is committed to providing the appropriate framework to facilitate the attainment of this goal.

Within the scope of the *National Strategic Plan (NSP) 2006-2025*, the Government committed to Building a Green Economy under Goal 4; *Global Excellence, Barbadian Traditions* which provides the blueprint for the realisation of Barbados' vision of becoming a fully developed society that is prosperous, socially just and globally competitive by the end of the first quarter of 20th century. The Plan set the strategic goals in pursuit of the national vision for 2025. Amongst the goals, the Goal Four speaks to *'Building a Green Economy: Strengthening the Physical Infrastructure and Preserving the Environment'*. Achieving this goal focuses on the protection, preservation and enhancement of physical infrastructure, environment and scarce resources and calls for finding the right balance between the development and the preservation of the physical surroundings. The *Barbados Green Economy Scoping Study (GESS)* followed, with an outline of the necessary steps to move the Barbados economy towards a greener economy and the resulting net benefits that might accrue. Five sectors were of focus; agriculture, fisheries, building/housing, transportation and tourism with four cross-cutting issues; waste, water, energy and land. One of the critical recommendations made in the report is the establishment of a *SIDS-SIDS Knowledge Transfer Platform of Green Economy Policies and Practices*. The NSP was buttressed by the Green Economic Policy outlined in the Government of Barbados' 2007 Economic and Finance statement that established foundation principles for the green (and blue) economy as well as presenting a range of fiscal and programmatic proposals to support sectoral transformation.

Under the *Partnership for Action on Green Economy (PAGE)-Programme* which Barbados joined in 2016 and commenced its programme of work in 2018, the government prioritised the following outcomes; (i) Baseline systems established for evidence-based progress assessment on green and blue economy; (ii) Resource-efficient interventions demonstrated in Agri/Fisheries value chains and infrastructure; (iii) Inclusive green and blue economy principles developed and integrated into evidence-based policy interventions; (iv) Enhanced institutional support for green and blue economy transition; and (v) Enhanced citizens engagement in Barbados' green and blue economy transition. Targeted outputs include: (i) A Green and Blue Jobs Survey, (ii) A Sectoral Study on the Fisheries Sector- given its Green Economy and Blue Economy potential; (iii) Establishment of a Youth Engagement and Communications platform on Green and Blue Economy; (iv) The Establishment of the Small Island Developing States (SIDS) Green Economy Knowledge Transfer Hub in Barbados; and (v) The Development and Delivery of Training Courses geared towards Inclusive Green Economy and Blue Economy for Barbados and Caribbean Small Island Developing States.

In addition, a project for additional support for green economic recovery entitled *Embedding a Circular and 5Rs Clean and Green Philosophy in Barbados' Recovery and Associated Consumption and Production Practices*, was submitted for the consideration of the PAGE Board and approved for implementation in Barbados as part of the PAGE-Barbados Programme. Currently, the necessary

institutional arrangements are being finalized for its implementation. This initiative has three thematic areas, namely; Thematic Area 1. Impact assessment, support for greening of economic stimulus packages and mobilizing private finance for green recovery; Thematic Area 2. Strengthening collective national ownership of green recovery plans and national discourse on green and inclusive recovery and Thematic Area 3. Targeted capacity building on green and inclusive recovery.

Moreover, Barbados was selected as the host of the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE)[25]²⁵, which was established in Bridgetown, Barbados, under the CARICOM framework in Partnership with UNIDO. The centre is working towards integrated and inclusive sustainable energy product and service markets within the Caribbean by mitigating barriers in the areas of policy and regulation, knowledge management, capacity building and investment and business promotion among all 15 CARICOM countries. UNIDO facilitates south-south and triangular cooperation between the various SIDS regions on joint sustainable energy issues and solutions through the platform of the Global Network of Regional Sustainable Energy Centres (GN-SEC)[26]²⁶. The network covers 36 of 38 SIDS and has collected some experience with regard to SIDS-SIDS cooperation on knowledge management and capacity building. For example, through the CCREEE and PCREEE regional electric mobility policy frameworks were established. This offers space for joint learning.

Recently, Barbados also saw the creation of the Barbados BLOOM Clean Tech Cluster,[27]²⁷ which is providing intelligence and incubation support for local clean tech businesses and start-ups in Barbados. The cluster will be part of the global BLOOM programme covering also other lower and medium-income countries and SIDS.[28]²⁸

Baseline National level ? Grenada: The Government of Grenada/Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)/UNDP Integrated Climate Change Adaptation Strategies (ICCAS) Project that ended in 2019 aimed to increase resilience of vulnerable communities and ecosystems to climate change risks in Grenada through integrated adaptation approaches. Key knowledge management elements of the project included increasing the adaptive capacity of communities through the implementation of concrete community-based adaptation actions and dissemination of lessons learned and best practices at the local, national, regional and international levels.

The GCF-funded *Integrated Physical Adaptation and Community Resilience through an Enhanced Direct Access pilot in the public, private, and civil society sectors of Three Eastern Caribbean small island developing states*[29]²⁹ that started in 2019 includes knowledge management elements associated with *inter alia*, implementation of ecosystem-based adaptation measures for climate-proofing investments and enhancing community resilience to climate impacts manifested in droughts, floods and hurricanes.

The *Grenada National Ecosystem Assessment (NEA) Project* (started in 2020) under a global initiative funded through the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMU), the International Climate Initiative (IKI) with global project oversight by UNEP-WCMC includes knowledge management-oriented outputs that include; communication materials to increase access to the evidence base and facilitate uptake of the assessment findings by practitioners and policy makers, policy support tools and methodologies, a national multi-stakeholder platform to support the assessment process, and to provide ongoing communities of practice facilitating a science-policy interface and case studies and lessons learned made available through relevant communities of practice.

The GEF/UNDP *Implementing a "Ridge to Reef" Approach to Protecting Biodiversity and Ecosystem Functions within and Around Protected Areas (Ridge to Reef) project* supports a ridge-to-reef approach in strengthening land, forest and reef management processes and biodiversity conservation on all terrestrial landscapes and marine and seascapes in Grenada, with focus on marine and terrestrial protected areas. The project will contribute to development of a policy-based legal, planning and institutional/regulatory framework in support of a sustainably managed network of terrestrial and marine protected areas, improve management of landscapes and seascapes by adopting sustainable land management and sustainable forest management principles and practices as a matter of public policy for protection and sustainable use of biodiversity, prevention of land and coastal environment degradation. The project aims to integrate livelihood objectives within the management of forest and marine eco-systems.

Baseline Caribbean regional level: There are several institutions and associated cooperation frameworks that have dedicated investment in knowledge management that include those under the CARICOM organizational umbrella and at the Organization of Eastern Caribbean States (OECS) sub-regional level. Although the project focuses on GEF project learning and transformation, these ongoing efforts are critical feeder elements to the proposed knowledge hub mechanism, and in the medium and long term the knowledge components therein will be incorporated and networking with them strengthened.

University of the West Indies Green Economy Group: This group has been researching and publishing on the Green Economy following the completing of the Green Economy Scoping Study. Signature publications from the group cover topics ranging from the impact on stock prices of green firms in emerging markets and exploration of wage differentials between green and non-green industries, the comparative advantage and green goods in the Caribbean to willingness to pay for marine conservation.[30]³⁰

The XX11 Forum of Ministers of the Environment for Latin America and the Caribbean (LAC) pursuant to Decision 8 calls for support to Caribbean SIDS with the *establishment of a Regional Modality or Institutional Mechanism in Caribbean SIDS*, in the form of a SIDS Cooperation and Knowledge Hub preferably within a regional university, with the support of the ITC Agencies and others financial institutions such as the GEF, regional and hemispheric banks (e.g. CDB; Latin American Bank, IADB etc.) and UN Agencies[32]³¹. The University of the West Indies, Cave Hill Campus has advised the Secretariat of the Forum of Ministers of LAC of its intention and commitment to the establishment of a SIDS Cooperation and Knowledge Hub; the offer has been accepted by the Forum Secretariat. The Decision of the Forum of Minister of the Environment for LAC is consistent with recommendations made in the *Barbados Green Economy Scoping Study (GESS)* report for the establishment of a SIDS-SIDS Knowledge Transfer Platform of Green Economy Policies and Practices. It is also consistent with directives of Caribbean SIDS conveyed in the San Pedro Declaration (2018) that resulted from a preparatory meeting for the Mid-Term Review (MTR) of the SAMOA Pathway. The Declaration calls for enhancing institutional modalities for the facilitation of SIDS-SIDS cooperation and the establishment of knowledge transfer platforms for SIDS-SIDS cooperation and collaboration using ICT platforms.[32]³²

A key foundational effort of the University of the West Indies upon which this project is being built is the Feasibility Study of the Establishment of a SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub. This effort, which was undertaken in 2021 explored the feasibility of establishing a SIDS-SIDS Green-Blue Economy Knowledge Hub at the University of the West Indies, Cave Hill Campus. The Feasibility Study was undertaken within the overall framework of the of Green-Blue Economy Learning Programme, whose goal is to mainstream relevant Green Economy and Blue Economy principles in university-level-learning interventions that address contemporary sustainable development policy challenges in Barbados and other Small Island Developing States. Barbados, as one of the flagship projects of the UNEP Partnership for Action on Green Economy (PAGE) Programme[33]³³ is

being piloted in respect to the process and methodology for transformation of the amassed knowledge under the Barbados PAGE Programme to a knowledge exchange hub[34]³⁴. The feasibility study concluded that the establishment of the SIDS-SIDS Green?Blue Economy Knowledge Transfer Hub is not only feasible; but is relevant and necessary to advance the SIDS agenda. It has been recognized that such a mechanism will can contribute to strategic evolution of Sustainable Development in SIDS and enhance its position in influencing negotiations at the international and regional levels.[35]³⁵

The mission of the *University Consortium of Small Island States* is to enhance graduate education institutions in SIDS by facilitating the development of the capacity needed to implement the Barbados Programme of Action. Its objectives, include, *inter alia*; improved information flow among members on courses offered, facilities, student needs and relevant documents; cooperative curriculum development, research, indigenous knowledge management and outreach in the key areas of sustainable development of SIDS by supporting resilience building for sustainable development; the sharing of research findings and reference materials resulting from SIDS-focused research. The results emulating from this project will be used to enhance the curricula offered by the Consortium of SIDS Universities which comprise of the University of Malta, University of Mauritius, University of the South Pacific, University of the Virgin Islands and the University of the West Indies.

Cartagena Convention Secretariat, Caribbean Regional Seas Programme. The Cartagena Convention entered into force in 1986 with the mandate of protection of the Caribbean Sea from pollution, protection and preservation of rare or fragile ecosystems and habitats, and development guidelines for planning and environmental impact assessments of important development projects. Projects and activities take place under three programme areas; (i) Assessment and Management of Environment Pollution (AMEP), (ii) Specially Protected Areas and Wildlife (SPA) and (iii) Communication, Education, Training and Awareness (CETA)[36]³⁶. The Secretariat provides a knowledge node for Contracting Parties to the Convention, with its third CETA programme area serving the role as the primary node. This knowledge node functions as a repository for information and knowledge derived from the range of projects and activities of the Secretariat. For initiatives the Secretariat is engaged there are separate webpages notably for the larger GEF projects such as the Caribbean Regional Fund for Wastewater Management (GEF CRW)[37]³⁷ and the Integrating Water, Land and Ecosystem Management in Caribbean SIDS (GEF IWEco).[38]³⁸

The *Sustainable Development Desk of the CARICOM Secretariat* is mandated to focus on coordination and execution of relevant work with regional partners and CARICOM institutions related mainly to Chapter IV of the *Revised Treaty of Chaguaramas Established the Caribbean Community including the CARICOM Single Market and Economy (CSME)*.^[39] Article under Chapter IV of relevance to the environmental and sustainable development agenda include Article 55 on Sustainable Tourism Development, Articles 56.1 and 57 on Agriculture, Article 58 on Natural Resource Management, Article 60 on Fisheries Management and Development, Article 61 on Forest Development and Management, Article 65 on Environmental Protection. The Sustainable Development Desk of the Caribbean Community Secretariat is currently in the process of facilitating the finalisation of the *Community Environment and Natural Resources Policy Framework* for consideration of the Council on Trade and Economic Development (COTED) of the Caribbean Community. It is anticipated that SIDS-SIDS Green-Blue Economy Knowledge Hub will play a significant role in support the implementation of the Action Plan linked to the operationalisation of the Policy Framework. The Sustainable Development Desk also provides networking support within the Treaty framework to support negotiations and knowledge management and sharing. Some of this is being supported under the (EU-funded) *Caribbean Hub ? Capacity Building Related to The Implementation of Multilateral Environmental Agreements (MEAs) In African, Caribbean and Pacific (ACP) Countries* in collaboration with UNEP's Law Division.^[40] In addition, a number of the Caribbean Community's Institutions also have environmental mandates including knowledge management and capacity building support functions and will therefore benefit from functional linkages with the Hub.

At the sub-regional level, the *Organisation of Eastern Caribbean States (OECS)* maintains a Knowledge Centre; *OECS No'laj tje*^[41] a dedicated online platform that carries resources on a variety of thematic areas that the agency is engaged with. The thematic areas related to environment and sustainable development, specifically biodiversity and ecosystems management, climate and disaster resilience, energy and oceans governance are in general alignment to the St. George's Declaration of Principles for Environmental Sustainability in the OECS.

The *Partnership Initiative on Sustainable Land Management (PISLM)* for Caribbean SIDS, an inter-governmental convening mechanism for the Caribbean SIDS participation in the UNCCD is currently executing a number of GEF projects. One of those projects *Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDS-SOILCARE Phase 1)* has significant knowledge management components, which not only serves as a baseline for this project but also provide the basis for synergetic collaboration between these two GEF projects. Of particular interest is the proposed establishment of the establishment of *Caribbean Land Degradation Neutrality (LDN) and Sustainable*

Land Management (SLM) Knowledge Hub and Caribbean SLM/LDN SIDS-SIDS Cooperation Mechanism In addition, the PISLM has a series of commitments and action-oriented coalitions focused on deliverables, intended to translate political commitment into action. The PISLM serves as a mechanism to facilitate exchange of experiences and good land management practices between participating countries. Furthermore, the initiative serves as a mechanism for stimulating the replication of various approaches, tools and methodologies throughout the region[42]⁴².

The *Caribbean Natural Resources Institute (CANARI)* works with communities in research, policy influence and capacity building for participatory natural resource governance in the Caribbean. The organization hosts the *CANARI Knowledge Hub* aimed to connect and network on themes related to Caribbean sustainable development, natural resource governance and management[43]⁴³.

Baseline - Global level: There are numerous global knowledge management platforms available to GEF project management, collaborating partners and stakeholders in the Caribbean, in addition to the resources available through regional partners. None of them however are specifically dedicated to SIDS sustainable development nor the extraction of green-blue learning elements from projects and programmes which have been implemented in SIDS. These platforms however provide foundational bases upon which investment in knowledge management platforms tailored for SIDS can be made. The following are key initiatives that have been commonly used in project development, knowledge capture and dissemination to support decision making and practitioner application. The overview is not exhaustive.

Global Environment Facility: GEF Kaleo[44]⁴⁴ is an online knowledge sharing system to provide a 'question and answer' platform to service GEF partners and stakeholders across the globe to assist with common queries. The *GEF Academy*[45]⁴⁵ provides an online and face-to-face curriculum of courses and learning events designed to enhance the capacity of GEF partners and stakeholders in execution of GEF-funded initiatives. The platform offers a catalogue of self-paced online courses and facilitated webinars, as well as face-to-face training events that draw on the latest knowledge and information regarding GEF policies, procedures and guidelines. Courses also provide best practices relevant to GEF investments, global expertise, technical information and lessons learned. *GEF-IW:LEARN*[46]⁴⁶ is the International Waters Learning Exchange and Resource Network established to strengthen transboundary water management around the globe by collecting and sharing best practices,

lessons learned, and innovative solutions to common problems across the GEF International Waters portfolio. It promotes learning among project managers, country official, implementing agencies, and other partners. An important baseline is the newly launched GefIslands.org^[47]⁴⁷ Knowledge Platform developed under the *Communication, Coordination and Knowledge Management (CCKM) Project*, under the *GEF-funded Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States (ISLANDS) Programme*. GefIslands.org is intended to serve as a knowledge hub and repository for SIDS knowledge on chemicals and waste.

UN Convention on Biological Diversity: The Clearing-House Mechanism (CHM) has been established further to Article 18.3 of the Convention and Decision X/15 to provide effective information services and other appropriate means in order to promote and facilitate scientific and technical cooperation, knowledge sharing and information exchange, and to establish a fully operational network of Parties and partners^[48]⁴⁸. The *Biosafety Clearing-House (BCH)*^[49]⁴⁹ has been established under Article 20 of the Cartagena Protocol on Biosafety to facilitate the exchange of information on Living Modified Organisms (LMOs) and to assist Parties in complying with their obligations under the Protocol. Under the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, the *Access and Benefit-sharing Clearing-House (ABSCH) Knowledge Base*^[50]⁵⁰ is an online tool designed to help users become familiar with the Clearing-House, learn how to submit records, search for information and complete other important tasks.

UN Convention to Combat Desertification: The UNCCD Secretariat Knowledge Hub^[51]⁵¹ supports knowledge-management tasks, together with the Committee on Science and Technology (CST), by providing a framework for organizing scientific and technical information and access to best practices. The Knowledge Hub seeks to connect national, regional and global platforms and networks to create an access point for sharing proven best practices and scientific knowledge on desertification, land degradation and drought (DLDD).

UN Framework Convention on Climate Change: The Adaptation Knowledge Portal (AKP)^[52]⁵² is a product of the Nairobi Work Programme (NWP), the UNFCCC knowledge-for-action hub for climate adaptation and resilience. The AKP aims to provide access to information and knowledge on climate change adaptation, and on the work of related work streams under the Framework Convention on

Climate Change. The AKP builds on the worldwide contributions of policy-makers, practitioners and researchers to offer first-hand information and actionable knowledge for end-users.

UN Environment Programme: The *Publications & Data portal*^[53]⁵³ hosts a wide range of environmental resources that include real-time data tools and platforms to key reports, publications, fact sheets and interactives. *Earth School*^[54]⁵⁴ was co-created by UNEP and Ted-Ed to provide children, parents and teachers with engaging nature-focused content to stay connected to nature during the global COVID-19 pandemic, which has seen approximately 1.5 billion children out of school. Earth School takes students on 30 quests, each focused on a different nature-related topic. The Forum of Ministers of Environment for LAC supported by the UNEP Office for Latin America and the Caribbean, also established UNEP Environmental Training Network for Latin America and the Caribbean. That network includes a number of subregional university knowledge-based partnerships and alliances including the Mainstreaming Environment and Sustainability in the Caribbean Universities (MESCA). During the XXI Meeting of the Forum of Ministers of Environment of Latin America and the Caribbean (Buenos Aires, Argentina, 2018), in the Declaration of Buenos Aires^[55]⁵⁵, the countries agreed to strengthen environmental education as a cross-cutting issue and provide more support to the Environmental Training Network of Latin America and the Caribbean to promote cooperation in the exchange of experiences among the countries of the region, generating synergies with other initiatives and networks that promote environmental education^[56]⁵⁶.

UN Industrial Development Organisation: A PAGE partner agency, hosts an *Online Knowledge Hub* inclusive of a Training Academy, Online Tools for policy makers, institutions, enterprises and consumers, as well as database with a range of technical publications.

International Labour Organization Peer Learning Hub for Enterprises in Asia Pacific: An all-in-one platform providing training materials and information related to the ILO's activity-based and peer learning programmes implemented in the region, allowing partners, providers and beneficiaries to access key resources online^[57]⁵⁷. ILO is a PAGE partner.

UN Food and Agriculture Organization: The *Resources portal* hosts data, interactive stories and publications accessible via the main portal. The FAO Regional Office for Latin America and the

Caribbean hosts platforms for publications and multimedia[58]⁵⁸ and project/programme information[59]⁵⁹.

UN Development Programme: Sustainable development resources relevant to Latin America and the Caribbean are hosted under links to the various programmes and initiatives of the agency[60]⁶⁰.

UN Institute for Training and Research (UNITAR) provides innovative learning solutions to individuals, organizations and institutions to enhance global decision-making and support country-level action. The agency offers toolboxes and expertise in learning, facilitation and process design methodologies, assisting to co-create tailor-made solutions for the specific needs of partners[61]⁶¹.

UN Programme on Reducing Emissions from Deforestation and Forest Degradation (FAO, UNDP, UNEP): The *REDD+ Academy*[62]⁶² is a coordinated REDD+ capacity development initiative led by the UN-REDD Programme and the UNEP Environmental Education and Training Unit, which seeks to match the scale of the global climate change mitigation challenge and enable systematic, focused capacity development to deliver REDD+ on the ground. The REDD+ Academy is a comprehensive response to capacity building needs identified by the countries receiving support from the UN-REDD Programme.

Other organisations: There are numerous other development organizations that work with stakeholders in the Caribbean with focus on sustainable development and supporting investments in green-blue economy opportunities and lend support through dedicated knowledge management platforms. These agencies host substantial resources on their respective web platforms. Some examples of the agencies with a wide engagement in the Caribbean region and their KM portals include the International Union for Conservation of Nature (IUCN) resource portal at <https://www.iucn.org/resources>, the World Resources Institute (WRI) with various KM portals <https://www.wri.org/>,

3. The Proposed Alternative Scenario with a Brief Description of Expected Outcomes and Components of the Project.

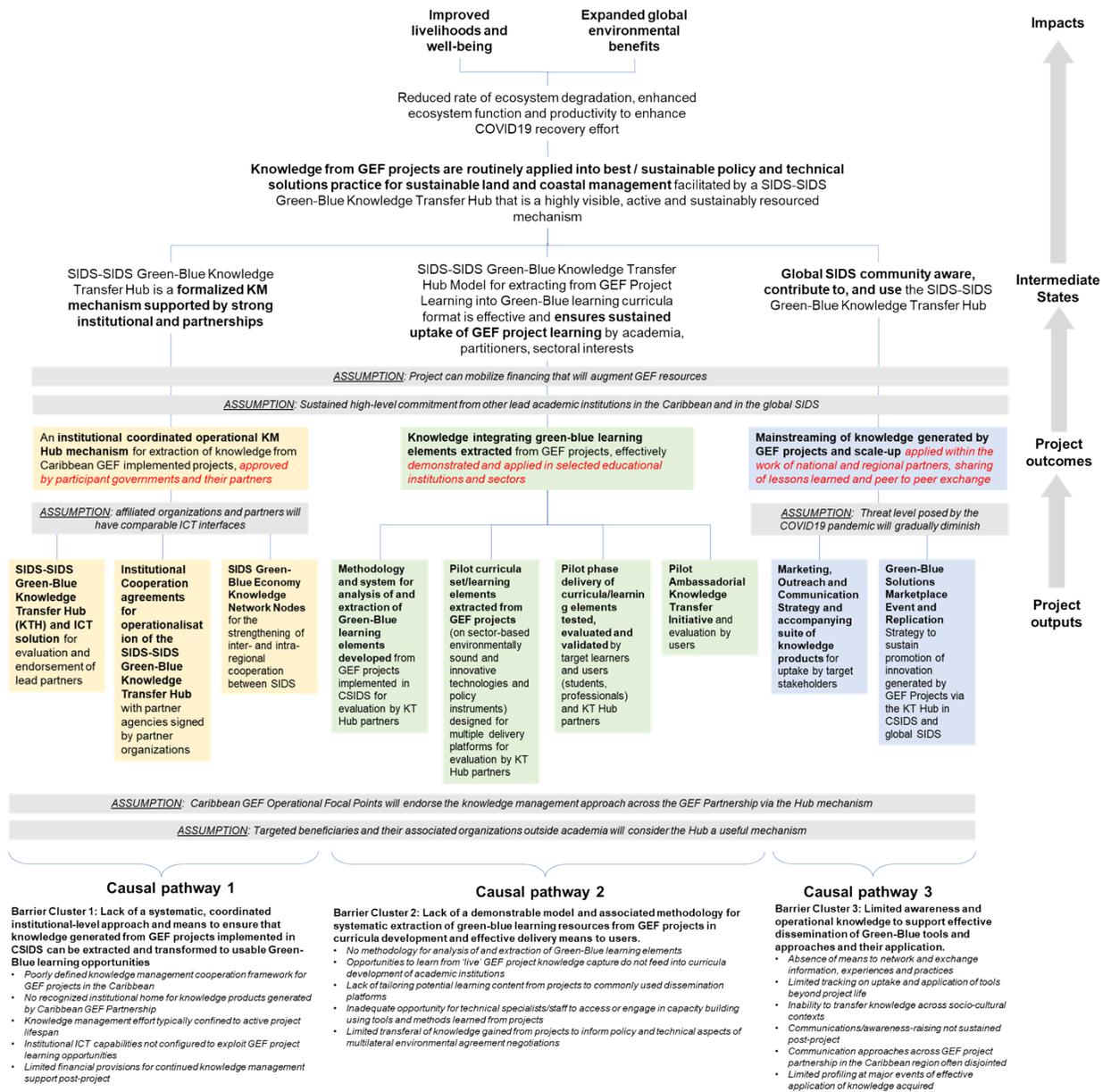
Project Overview: The GEF's incremental funding and co-financing resources will be used to overcome the identified barriers that generally hinders the country from effectively adapting, replicating and upscaling knowledge gained from collective project investments primarily in sustainable land and coastal area resource management that could otherwise position the country to move more quickly toward a green-blue sustainable resource management pathway that is now urgently needed in the wake of the COVID19 pandemic. The project will be oriented with primary alignment to the GEF Land Degradation focal area as the entry point, toward the objective of supporting countries to create enabling environments to support scaling up and mainstreaming of sustainable land management (SLM) and land degradation neutrality (LDN). However, given the cross-sectoral approach the project will need to adopt, considerations under GEF's International Waters focal area objective of strengthening blue economy opportunities through sustainable healthy coastal and marine ecosystems will also be applicable, particularly in the context of watershed to coastal area nexus (ridge-to-reef) in SIDS. Additionally, the GEF Chemicals and Waste focal area objectives whereby countries are supported in strengthening sound management of industrial, agricultural chemicals and their waste through better control, and reduction and/or elimination and associated enabling environments to manage harmful chemicals and waste are also relevant in the context of interconnected circular-economy approaches to mitigate environmental degradation.

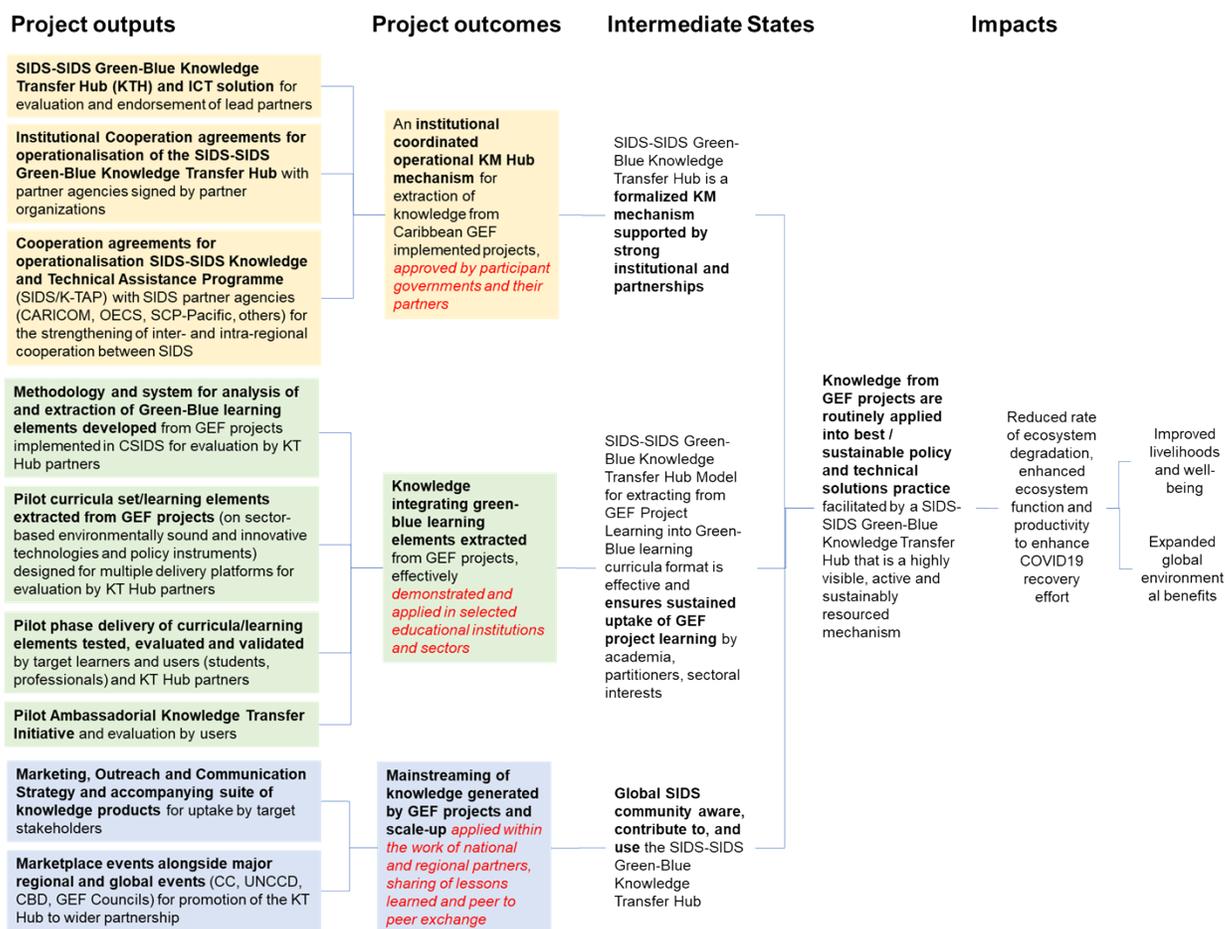
The project's theory of change is underpinned by the desired intermediate state of realizing the increased and sustained replication of green-blue solutions in post-COVID recovery through (i) enhanced planning and development decisions that benefit from the wealth of GEF project knowledge contributions and (ii) an empowered and vibrant community of practice that actively exchanges information and experiences to promote and apply green-blue solutions. Ultimately the project will contribute to making the communities of the Caribbean more resilient to external shocks such as the COVID-19 pandemic, and the threats of climate change and lessening the degradation risks posed the country's ecosystems that will contribute to expanded global environmental benefits.

Assumptions: The project considers the following assumptions that will need to hold to realize the anticipated outcomes through the proposed causal pathways. A core assumption is that the GEF Operational Focal Points on behalf of the Governments will endorse the knowledge management approach for uptake and learnings from GEF projects via the Knowledge Management Hub as proposed by the project, and express commitment to work closely with the University of the West Indies as the lead proponent in application of the approach in the long-term with GEF Caribbean Partnership and wider to SIDS at the global level. A central assumption is that targeted beneficiaries and their associated organizations outside academia will consider the Hub a useful mechanism relevant to support of enterprise development and livelihood enhancement around green and blue economy opportunities. The project

assumes that there will be a sustained high-level commitment from other lead academic institutions in the Caribbean and in the global SIDS affiliated to the University of the West Indies, toward building and strengthening long-term collaborative arrangements as partners in the KM Hub. It is assumed that affiliated organizations and partners will have comparable ICT interfaces with appropriate bandwidth that will enable the flow of data and information from the Hub and that they will have capabilities to ensure uptake among their user groups. A critical assumption is that the project will be able to successfully mobilize financing that will augment GEF resources and create the conditions for sustainable financing of the Hub post-project. Finally, the project assumes that the threat level posed by the COVID-19 pandemic will gradually diminish by the time the project is mobilized and that health protocols associated with the need for travel and networking no longer cause further significant disruptions.

The project design is reflective of the causal pathways captured in the theory of change below (and Annex D).





This project will establish a new paradigm for the treatment of knowledge with respect to green-blue tools, methods and innovative technologies resulting from projects being implemented in CSIDS. The project therefore intends to break the barrier of disjointedness with respect to treatment of knowledge management by facilitating change from a passive position of simply a recognition that projects implemented have made a contribution to knowledge, to one in which the knowledge is stored, used as learning and research tools by their integration into curricula development and made accessible to a wide cross section of stakeholders; including practitioners in the field. In addition, the project will demonstrate proof-of-concept to work out operational and partnership modalities.

The project seeks to deliver intended outcomes under three project components. Investment under **Component 1** will realize the outcome of stakeholders adopting an SIDS-SIDS Green-Blue Knowledge Transfer Hub as an effective mechanism to consolidate, disseminate, uptake and apply knowledge harvested from GEF projects in Caribbean SIDS. Investment under **Component 2** will realize strengthened stakeholder capacities and means enabled to uptake Green-Blue learning elements which become foundational best practice among user community. In this regard, case studies from

Barbados and Grenada will be used as pilots to test the methodologies for extraction of green-blue leaning elements and innovative approaches, and transformation into curricula based on analysis of GEF projects. **Component 3** will focus on increasing awareness and buy-in to the knowledge transfer hub with active use among stakeholders.

In applying the Green-Blue learning elements extracted from GEF Projects implemented in CSIDS, the *cradle-to-cradle* approach will be applied; a revolutionary vision to more sustainable practice in harmony with how life on Earth works from a circular economy point of view.[63]⁶³

Component 1: Establishment of a SIDS-SIDS Green-Blue Environmental Knowledge Transfer Hub as a formalized mechanism: This component will facilitate strengthening of the institutionalization of the SIDS-SIDS Green Knowledge Transfer Hub at the University of the West Indies, Cave Hill Campus, to advance the foundational efforts already developed through the PAGE-Barbados Programme as endorsed by LAC Ministers of Environment in 2021. The process will entail building partnerships and alliances, particularly with organisations and mechanisms across the world promoting Green-Blue Growth Strategies, analyze information capture and utilization among users across all stakeholder interests, determine opportunities for enhancement and the operationalization of a system that will meet the needs of users, built on a sustainability framework that will ensure continuity. The requirements for the appropriate web-accessible ICT solution to support the knowledge management will be determined and requisite capacity installed. This ICT solution, built as a content management system will be the Hub's interface to online users. Operational and cooperation modalities between organizations engaged in the Caribbean GEF Partnership and other stakeholders and beneficiaries will be elaborated, and organizational commitments via MOUs and other instruments for engagement secured. This will include pathways for sustainability and financial viability of long-term operation of the Hub. This component will also contribute to strengthening the cooperation framework at the global SIDS level.

Outcome 1.1: An institutional coordinated operational Transfer KM Hub mechanism for extraction of knowledge from Caribbean GEF implemented projects, approved by participant governments and their partners

Output 1.1.1. SIDS-SIDS Green-Blue Knowledge Transfer Hub (KTH) and ICT solution for evaluation and endorsement of lead partners: During the PPG project design phase, stakeholder consultations to be led by the University of the West Indies (UWI), Cave Hill Campus, Barbados (facilitated by specialists to be retained under the project), will be conducted to frame the operational

modalities of the Hub, using the Feasibility Study which have been prepared and approved as the basis. The core entities to be engaged (refer to the Stakeholders Section) will be further defined at the PPG phase, but will include representatives of the government sector (ministries with responsibility for environment/natural resources, agriculture, physical development, economic affairs, foreign affairs, etc.) of the Governments of Barbados and Grenada, organisations that have already been engaged to date under the PAGE-Barbados Programme, the GEF Partnership, faculty from the various campuses of the University of the West Indies (Cave Hill Barbados; Mona, Jamaica; St. Augustine, Trinidad & Tobago; Five Islands Campus, Antigua & Barbuda), regional organisations including the Caribbean Community Secretariat; Sustainable Development Directorate, the Organisation of Eastern Caribbean States (OECS), the Caribbean Development Bank (CDB), the Partnership for Sustainable Land Management (PISLM) for Caribbean SIDS, private sector and relevant non-governmental and community-based organisations. These consultations will build on the early endorsement which has already been secured from the Governments of Barbados and Grenada respectively.

The consultations will inform under project implementation, the preparation of an *expanded Hub operational design* to meet the intended outcomes to be realized under the project, specifically related to enhancing the role to support the GEF Partnership, with the wider aim of enhanced SIDS-SIDS knowledge exchange and cooperation. **The ICT solution will be designed so that gender considerations at the 'strategic level' are incorporated. The Institute for Gender and Development Studies of the UWI is expected to play a key role in this regard.** To be included in the operational design will be development of a *sustainability/resource mobilization strategy* that will consider the institutional operational requirements and associated costs. The strategy will include the retaining of a specialist knowledgeable in developing financing proposals for international financial organisations to attract financing to the Hub. In ensuring long-term sustainability, and that GEF project learning is maximized, it is proposed that all new GEF projects to be designed (to the extent practical) for Caribbean Small Island Developing States (CSIDS) include a knowledge management component which would 'feed-in' to the Hub. This will facilitate provision of resources via the projects, enabling the work of the Hub. During the PPG phase an *ICT design study* for the operationalization of the Hub will be undertaken, taking into consideration the need for effective connectivity with SIDS both within the Caribbean and beyond, and for building relations with Green and Blue Economy institutions worldwide. The proposed ICT solution, built as a content management system will be the Hub's interface to online users. The design will build on the already existing ICT architecture of the university, taking into consideration the knowledge management functionalities anticipated by the KM Hub to determine requirements, anticipated interface and mechanisms for information exchange with other partner organizations, users and stakeholders. The ICT design will specify the *installation and operational costs and administrative requirements of the ICT solution* which will guide the preparation of a draft ICT solution procurement plan as part of the PPG phase, in line with the budget envelope of the project. On project inception, the procurement plan will be reviewed and further validated and will guide the *Hub ICT Solution procurement and installation* under the project. Synergies and lessons learned from other knowledge hubs will be considered.

Output 1.1.2. Institutional Cooperation Agreements for operationalisation of the SIDS-SIDS Green-Blue Knowledge Transfer Hub with partner agencies signed by partner organizations: In parallel with determination of the requirements for the Hub operational design under Output 1.1.1, an indicative capacity review of the core agency partners and stakeholders (listed above) that will support the management and operation of the Hub will be carried out during the PPG phase. This indicative capacity review will be the basis for a more detailed assessment that will be carried out during project implementation, toward the formalization the *Institutional Cooperation Agreements* with green-blue growth organisations, including PAGE-related partner entities, technical assistance donor agencies and political inter-governmental processes in which CSIDS participate, which will assure the long-term sustainability of the Hub in pursuit of its objective of promoting Green-Blue Economy Learning in SIDS. Indicative roles, responsibilities and operational modalities of the partnerships of these supporting agencies will be defined, and partner commitments secured during the PPG design phase. Draft agency agreement templates will be developed during the PPG Phase for consideration by stakeholders. The process of formulating and finalizing the institutional cooperative agreements will entail the continued *convening of consultations* early in the project implementation process (building from PPG and jointly with Output 1.1.1 delivery), to be led by the UWI's Office of the Deputy Principle. Project resources will support the hosting costs for in-person consultations that will be augmented with virtual participation, particularly for more distant SIDS agency collaborators. The consulting experts to be engaged under the project (and the project team) will finalize the agency cooperation agreements based on the recommendations from these consultations. These agreements will define the modalities for data and knowledge exchange, peer review and technical support across all the project components for the duration of the project. In the later stages of project implementation, the efficacy of the cooperation agreements entered into by partners will be evaluated and updated and/or modified as needed so as to form the foundation for the permanent institutional cooperation framework for the Hub.

The project will *operationalize the Scientific and Technical Knowledge Transfer Advisory Group (ST-KTAG)* which will be fundamental to the operations of the Hub, since it will play a critical role with respect to the creation and curation of new knowledge and synthesizing of relevant existing knowledge that will be taken up under the Hub. A number of tangible results and benefits are expected to result, including inter alia; a commitment by these organisations to work closely with the Transfer Hub, in particular with respect to data curation, quality assurance and quality control of knowledge inputs and outputs, resource mobilization and the utilization and integration in their work of the outputs resulting from the activities of the Hub.

Output 1.1.3. SIDS Green-Blue Economy Knowledge Network Nodes for the strengthening of inter- and intra-regional cooperation between SIDS: This output will be the vehicle for strengthening inter- and intra-regional cooperation on sustainable development between global SIDS regions and will form an integral part of the Knowledge Transfer Hub Mechanism. This output has its grounding in the various SIDS instruments agreed to by the international community,[64] which calls for enhanced regional and interregional cooperation among SIDS. Mechanisms aimed at enhancing SIDS-SIDS

cooperation on Inclusive Green Economy Learning; environmental and sustainable development cooperation action between CSIDS and SIDS-Global will form an integral part of the Knowledge Transfer Hub's focus. These mechanisms will not only be used to facilitate the mainstreaming of relevant Green-Blue Economy principles in university-level-learning interventions that address contemporary sustainable development policy challenges faced by Barbados and Grenada, but also other SIDS based universities, and will be used as a basis to enhance collaboration with various other development and knowledge management partners working with SIDS. In this regard, the project will support the *designation of three SIDS Green-Blue Economy Knowledge Network Nodes*; one each for the Caribbean, the Pacific and AIMS (Atlantic, Indian, Mediterranean) SIDS as the mechanism to expand the Hub to the global SIDS level. The UWI will be node for the Caribbean; the host institutional nodes for the other SIDS regions will be determined either at PPG or in early stage of project implementation in consultation with stakeholders. The PPG phase will evaluate existing cooperation arrangements across the SIDS and determine gaps that will need to be addressed in realizing functionality as KM nodes, along with the modalities for operationalizing, including determination of the scope of engagement and support the project and the collaborating partners will provide. This process will lead to the development of an *inter-node cooperation framework* to operationalize the framework that specify how these nodes will work together within the scope of the SIDS-SIDS Green-Blue Knowledge Transfer Hub to contribute to a SIDS Green-Blue Technical Assistance Programme as called for in the BOPA and SAMOA Pathway.

Component 2: Development of a demonstration model for extracting learning from GEF Projects into Green-Blue learning curricula formats for sectoral application: The project will develop a knowledge extraction methodology based on ongoing or recently completed GEF projects that were recognized to be best practice in terms of useful policy and technical contributions. The methodology will be designed with a recommendation that Caribbean GEF projects contain specific knowledge transfer elements that are linked to the Hub, ensuring that the Green-Blue learning elements from these projects are automatically captured and recorded by the Knowledge Transfer Hub. The content will be transformed to learning curricula and educational resources that will be pilot tested by learners in Barbados and Grenada. A pilot ambassadorial knowledge transfer initiative will also be developed under this component to enhance uptake of policy and technical knowledge to support negotiating processes.

Outcome 2.1: Knowledge integrating green-blue learning elements extracted from GEF projects, effectively demonstrated and applied in selected educational institutions and sectors

Output 2.1.1. Methodology and system for analysis of and extraction of Green-Blue learning elements from GEF projects implemented in CSIDS for evaluation by KT Hub partners: A replicable methodology will be developed and tested under the project that enables the Hub to assess CSIDS GEF projects on an ongoing basis, for extracting green-blue learning elements for

transformation into curricula, training modules and capacity-building tools, but also to influence evidence-based formulation. These learning tools should be 'climate proofed' to ensure that they also contribute to enhancing climate resilience. During the PPG phase, the *GEF portfolio of projects implemented in CSIDS will be screened to select those that have good potential to provide content for learning*. Non-GEF funded relevant projects may be considered based on prior work of UWI with its consortium of partners. A further analysis will be undertaken to identify a sub-set of projects that not only gained good terminal evaluation assessment, but have been confirmed among the GEF Partnership, stakeholders and beneficiaries as having yielded replicable best practice; environmentally sound and innovative technologies and policy instruments; green-blue tools and methodologies etc. Consultations, as necessary will be held with the relevant GEF Implementing Agencies represented by their project evaluation offices or counterparts, the Independent GEF Evaluation Office, the Scientific and Technical Advisory Panel (STAP), and the Executing Agencies of the selected projects, to get additional guidance and information which may be deemed necessary and on the methodology which will be applied for extracting the green-blue learning elements. The core consideration is that the project does not duplicate existing efforts among partners but serve to ensure that there is harmonization of efforts and importantly, enhance sustainability of application of project outputs. This will lead to *recommendations on a replicable approach for analysis and harvesting of learning elements*. **The methodology for analyses and extraction of learning elements will be designed so as to optimize learning opportunities that lead to expanded gender-based benefits. The Institute for Gender and Development Studies of the UWI is expected to play a key role in this regard.** Once the green-blue learning elements are extracted they will be applied, tested and validated by their application to two pilot projects, one each in Barbados and Grenada, respectively. One such pilot could focus on a post-COVID-19 transformative approach to the use of nature-based approach to sustainable tourism development and/ecosystem-based adaptation (EbA) and the other linked to creation of enabling environments to support scaling up and mainstreaming of SLM and LDN (GEF focal area objective LD2-5), and/or the utilization of sustainable technological options to small and medium sized enterprises. The methods and tools used in the pilots should have been applied in GEF projects implemented in CSIDS. For the projects under consideration, an assessment will be undertaken of knowledge management methodologies around SLM/LDN for which operational and functional collaboration can be developed. SLM and LDN learning elements extracted from these projects will be appropriately formulated and contributed to the WOCAT Global Database on Sustainable Land Management[65]⁶⁴. Given the close watershed to coastal area nexus in SIDS, lessons from projects focused on strengthening blue economy opportunities through sustainable healthy coastal and marine ecosystems will also be (aligned to GEF focal area objective IW1-1) considered.

An evaluation of the methodology will be carried out at a prescribed point in project implementation to fine-tune or adapt the approach with the *publication of the final agreed methodology* for extraction of learning elements.

Output 2.1.2 Pilot curricula set/learning elements extracted from GEF projects (on sector-based environmentally sound and innovative technologies and policy instruments) designed for multiple delivery platforms for evaluation by KT Hub partners: The project will contribute to the development of a suite of curricula tools and teaching resources extracted from a sub-set of innovative GEF projects (and possibly select non-GEF initiatives) that have been successfully implemented in the Caribbean region generated as Output 2.1. The aim is to create curricula that is demand-driven with specific focus on relevance to rebuilding and recovery in the post-COVID 19 period in agriculture, tourism development, sustainable consumption and production, sustainable land management and urban development, ecosystem-based approaches for restoration, application of circular economy approaches around Green-Blue sustainable development recovery strategies in the wake of the COVID-19 pandemic. It will also stress the importance of green and blue recovery approaches that take into consideration potential Global Environment Benefits (GEBs) for biodiversity conservation and sustainable use, land rehabilitation, climate mitigation and adaptation and a pollution free environment as a means of addressing the threats which underpin the rationale for having a systematic process of KM and learning from GEF projects. The PPG phase will develop a *draft terms of reference for the process of integration of the green-blue learning elements into curricula development*. The methodology will build on that developed for the Green-Blue Learning Programme at the University of the West Indies, Cave Hill Campus, which was developed with various inputs from the Barbados Green Economy Scoping Study. The UWI Centre for Teaching and Learning and the Faculty of Education will be key partners in this undertaking. Under the guide of the ST-KTAG, and with the input of UNITAR, UNEP and UNIDO and other relevant organisations (e.g. the Sustainable Development Units of both the Caribbean Community and OECS Commission Secretariats etc.), curricula specialists will develop *a pilot suite of curricula packages, templates for adaptation of the learning content and other learning resources*. The curricula developed will integrate gender-sensitive considerations as foundational and will place emphasis on opportunities that will enhance green-blue economic prospects for women and stakeholders. The project will ensure that women's groups and relevant stakeholder groups will be consulted and involved in validation and refinement of approaches as needed, to ensure gender considerations are adequately integrated. These curricula packages will be tailored for delivery in appropriate formats for use by students, professionals, practitioners and other stakeholders in both public and private sectors targeting the pilot countries of Barbados and Grenada. The design of the resources will incorporate considerations for wider application in Caribbean SIDS, Member States of LAC and global SIDS, under an upscaled follow-on GEF8 proposal.

Output 2.1.3 Pilot phase delivery of curricula/learning elements tested, evaluated and validated by target learners and users (students, professionals) and KT Hub partners: Under the Hub, affiliate training organizations will be identified to support the roll-out with learners outside the university in both Barbados and Grenada. This will be determined under the PPG phase. To execute the process a *training and orientation programme for trainers/instructors* will be developed under the guide of the ST-KTAG. During project execution the curricula developed as Output 2.2 will be *pilot tested with learner groups* from within the university; with undergraduate and graduate students aligned to applicable fields of study. Workshops and seminars using both in-class and virtual platforms will be convened with learners within green-blue economic sectors to include policy and technical

professionals within government support agencies, practitioners within private sector and community organizations. The project will ensure that there is appropriate gender balance in access to the learning resources. The project will *develop an assessment tool to evaluate the efficacy of knowledge uptake and potential for application* among learners. This will be the basis for validation and fine-tuning of the curricula developed. The process will be supported by the *convening of Green-Blue Learning Integration Dialogues* with the various stakeholders to assist them in the integration process both in curricula development and practical application in the field. **Importantly, the uptake and application of learning elements will be evaluated among users through the use of gender-specific indicators.**

Output 2.1.4 Pilot Ambassadorial Knowledge Transfer Initiative and evaluation by users: The KTH will facilitate access to policy and technical support for negotiators during environmental negotiations based on state-of-the-art knowledge assembled by the Hub, through the partnership contributions. This is intended to address one of the main weaknesses faced by CSIDS negotiators; the absence of sustained technical support and back-up during complex negotiations. This will create the space for policy and technical personnel to interact more dynamically with negotiators between Capital and negotiating spaces, to report periodically on issues being negotiated as well as the status of negotiation and strategies being adopted by the region. At PPG phase there will be an *assessment of capacity needs of environmental negotiators* within CSIDS to determine opportunities for improved knowledge capture from GEF Partnership initiatives and others as relevant, that have been completed in the region that can be fed to negotiating agendas. This will be done in consultation and guidance from the CARICOM Secretariat and the OECS Commission to ensure coherence, addresses gaps and builds on existing mechanisms. During the PPG phase a *framework for the operationalization of the Ambassadorial Knowledge Transfer Initiative* will be done and the necessary guidelines finalized. The means of sustainability will be included within the framework. This framework will serve as the basis for engagement of negotiators as part of the beneficiary groups of the knowledge management services of the Hub. During project execution with the operationalization of the Ambassadorial Knowledge Transfer Initiative, there will be the *hosting of workshops and seminars with negotiators* using content that has been assembled under the Hub via project support.

Component 3: Enhancement of sustainability and scale-up: The profile of the Hub to the Caribbean and the global SIDS community will be expanded under this component. In addition, mechanisms will be established with project proponents in CSIDS and SIDS in other regions to ensure that feedback is provided to project developers, decision makers and national executing agencies on lessons and the suitable approaches of intervention in a GEF context, thus making the knowledge generated accessible to other potential users such as the private sector, scientists, NGOs etc. This approach in addition to ensuring accessibility to relevant knowledge will also ensure that a connection exists between the academic host and the other potential users on the ground. This will be achieved through the convening of special sessions (workshops, seminars, webinars etc.). In addition, strategic functional linkages will be established between the Transfer Knowledge Hub and other regional and global SIDS relevant KM platforms coming out of GEF projects such as IW-LEARN and GEF-Islands to ensure ready access by stakeholders in CSIDS. In addition, provision will also be made for

enhancing access to knowledge tools that are global in nature such as Trends Earth and WOCAT. Under this component every effort will be made to market the work and services provided by the Hub. The main vehicle through which this will be accomplished will be through the implementation of a marketing, outreach and communication strategy, the dissemination of awareness materials and showcasing at regional and international partnership events.

Outcome 3.1: Mainstreaming of knowledge generated by GEF projects and scale-up applied within the work of national and regional partners, sharing of lessons learned and peer to peer exchange

Output 3.1.1 Marketing, Outreach and Communication Strategy and accompanying suite of knowledge products for uptake by target stakeholders: The project concept, output development, stakeholder engagement and the overall buy-in process will be supported by an effective Marketing, Outreach and Communication Strategy that will be designed during the PPG phase and rolled out during the course of project execution. The ultimate aim of the strategy is to ensure that the outputs of the project become mainstreamed within the work of the national and regional partners and are placed on a path for uptake and replication within beneficiary community. The strategy will be underpinned by national development strategic directions related to both Barbados and Grenada Growth and Development Strategy, respectively, as well as their COVID-19 pandemic recovery plans. The Strategy will define strategic functional linkages between the Hub and other regional and global SIDS relevant KM platforms and knowledge platforms associated with key GEF projects, notably IW-LEARN, and GEF-ISLANDS to ensure ready access by stakeholders in CSIDS. Embedded within the Strategy will be a feedback mechanism that will ensure that the project management team, the Scientific and Technical Knowledge Transfer Advisory Group (ST-KTAG), the wider project partnership, the GEF Operational Focal Points and relevant stakeholders (within the Caribbean and at the global SIDS level) will be able to assess how the project outputs are being utilized and offer recommendations for improvement. **The project will ensure that knowledge product use and uptake will be evaluated through the use of gender-specific indicators.**

The project anticipates the development of a suite of awareness resources that will be produced in support of all components of the project (the number and diversity of the products will be defined during the PPG phase). It is anticipated that resources will be made available in all commonly used formats, ranging from conventional printed materials such as booklets, leaflets, fliers and posters to electronic media products distributed via social media channels. The PPG design phase will consider within the scope of the proposed communication and public awareness strategy, the range of events that should be targeted and design requirements and lay out a gender-sensitive engagement framework with prospective partners and the results to be achieved.

Output 3.1.2 Green-Blue Solutions Marketplace Event and Replication Strategy to sustain promotion of innovation generated by GEF Projects via the KT Hub in CSIDS and global SIDS:

With the outputs from the other project components a major ?signature? *Green-Blue Solutions Marketplace Event* will be hosted in either Barbados or Grenada toward the latter stage of project implementation. This event, with high emphasis on best practice for private sector application, will be designed as a complement to the KT Hub that will showcase innovation from select GEF projects implemented in CSIDS that under Component 2, were used in the extraction of learning elements and curricula development and having commercial replication potential. This event will also contribute to facilitating, stimulating and enhancing green-blue economy business-relevant research and training. Other projects in the GEF portfolio in the Caribbean and at the SIDS level will also be considered as appropriate. Target audiences will include the project collaborators, the GEF Caribbean Partnership (GEF project personnel and associated direct beneficiaries), micro, small and medium-sized enterprises from the two countries along with sectoral and community-based organizations that support beneficiaries in knowledge transfer. This event will be designed so as to be replicable on a periodic basis, perhaps on a two-year cycle at various host locations in the Caribbean so that it becomes a regular fixture in the GEF Partnership in the Caribbean. The PPG phase will explore the parameters for development of a *Replication Strategy with a financing proposal* under the project that is anticipated to rely on contributions from the portfolio of GEF projects in the region, augmented by partner organization partners such as the Caribbean Development Bank, the Development Bank of Latin America (CAF), the Caribbean Biodiversity Fund among others, and contributions from the GEF emulating a similar mechanism as in place for the GEF-International Waters Learning Exchange and Resource Network (IW-LEARN) or alternative mechanism. The outcome of this signature marketplace event will be evaluated to best inform the how this initiative can be replicated and institutionalized as part of the KM Hub at both the Caribbean and global SIDS levels.

In addition, the project will promote the knowledge products through high-profile engagement at major regional and global events, including, as necessary either on mainstage or in side events (workshops, seminars, webinars) at a number of regional and international meetings, including, *inter alia*, the United Nations Environment Assembly (UNEA), the regional constituency meetings of the GEF, the GEF-International Waters Learning Exchange and Resource Network (IW-LEARN), the CARICOM Council for Trade and Economic Development (COTED) for Environment, the OECS Council of Ministers on Environmental Sustainability, the Conference of Parties for the Cartagena Convention, meetings of the Caribbean Hotel & Tourism Association/ Caribbean Hotel & Resort Investment Summit, etc. The overall impact from convening and participation in these events will be enhancing private sector embrace of green-blue development strategies and programmes through the creation of a *platform to share lessons learned and provide the potential for upscaling experiences*.

Output 3.1.3: A project monitoring and evaluation system: A robust gender-sensitive M&E system will be put in place to ensure continual assessment of progress in meeting project outcome and output targets.

4. Alignment with GEF Focal Area and/or Impact Programme Strategies

In the context of the proposed outcomes of this project, alignment can be realized with all the GEF focal areas considering the close sectoral interconnectedness of development agendas in small islands. However, for programming alignment, this project is placing emphasis on the GEF land degradation focal area considering that management of land assets in small landscapes and consequent negative outcomes of poor land use has cross-cutting and very immediate impacts on ecosystem services, and in turn impacts social and economic well-being. The influence of climate change will continue to greatly amplify the negative outcomes associated with land degradation. The primary focal area objective alignment is to: LD-2-5 to create enabling environments to support scaling up and mainstreaming of sustainable land management and land degradation neutrality; given the close watershed to coastal area nexus (ridge-to-reef) in SIDS, GEF focal area objective IW-1-1 to strengthen blue economy opportunities through sustainable healthy coastal and marine ecosystems will also be applicable. The GEF Chemicals and Waste focal area objectives, CW-1-1/2 that seek to strengthen sound management of industrial, agricultural chemicals and their waste through better control, and reduction and/or elimination and CW-2-3 to support enabling environments to manage harmful chemicals and waste are also relevant in the context of interconnected circular-economy approaches to mitigate environmental degradation.

The project will directly align particularly with the 2020 findings of the GEF's Independent Evaluation Office (IEO) in its report on *Evaluation of Knowledge Management of the GEF*[66]⁶⁵ that highlights the need for a standard approach or guidance on transforming data and information into usable formats that can be shared, notwithstanding the various knowledge management utilities that have been developed. Of note in the GEF-IEO findings is that there are deficiencies in capturing data and information at the project level and enhancing subsequent use in spite of the advancement of the fully online management of the project data and information, and increased integration of KM within project proposals. In this regard, this project proposal addresses the GEF-IEO core recommendation that there be investment in a technical solution that strengthens the overall knowledge management system. This will mean a solution to capture KM data, lessons, and good practices and to present them in a usable and accessible format for both GEF stakeholders and externally. While the recommendation points toward strengthening the mechanisms between the GEF Secretariat and agencies, this proposal will contribute to the wider partnership building with organizations such as universities that have technical competency and capability to serve as knowledge curators and support active knowledge application in a sustainable manner.

Importantly, the *Strategic Country Cluster Evaluation for SIDS* (2019) carried out by the GEF IEO[67]⁶⁶ that assessed the relevance and performance of GEF in helping address the main environmental challenges to SIDS and review of the determinants of sustainability yielded significant observations that served to align this project concept. The evaluation noted that the performance of SIDS projects was lower than for the overall GEF portfolio on the dimensions of outcome performance, and project implementation and execution and that regional projects performed significantly better on outcomes and sustainability. In the SIDS portfolio it was found that there remained inadequate investment in building local and national capacity with a lack of clear exit strategies and means to future financing. Besides the overall recommendation that integrated approaches (ridge-to-reef, integrated watershed management considering renewable energy approaches for sectoral productivity) there were a number of other recommendations that spoke to designing more integrated projects in line with whole island/blue economy approaches and improving project design with due consideration to sustainability. However, the most critical recommendation of direct relevance to this proposed project is to *‘promote innovation and knowledge exchange’*. The GEF-IEO noted that the *‘GEF project portfolio in SIDS should include a combination of innovative (e.g., income-generating products from invasive alien species) and scaling-up approaches that have shown to be effective. Innovation should be supported even if it has a higher risk. Regional programs should encourage a transfer of knowledge to the poorest SIDS through a South-South capacity-building approach’*. Given the finding that regional projects perform significantly better on outcomes and sustainability than national stand-alone projects (projects funded via STAR allocations under the biodiversity, land degradation and climate change focal areas) underscores the need for emulation of joint learning and collaboration opportunities that are typically built in into regional projects; this is where the knowledge hub concept can provide such integration.

Looking toward the *GEF 8 Programming Directions*[68]⁶⁷ specific attention is being paid to SIDS through the proposed Blue and Green Islands Integrated Program (IP), recognizing the continued challenges of these countries against the backdrop of the high degree of interconnectivity among marine and terrestrial ecosystems, economic sectors and livelihoods. In this regard, SIDS are uniquely positioned to pioneer nature-based solutions approach that underpins GEF investments. With emphasis on addressing interconnected environmental challenges driven by key sectors; tourism, food (agriculture, fisheries) and urban development the Blue and Green Islands IP anticipates strengthening sub-regional governance platforms to help to embed nature-based solutions in regional level institutional and policy frameworks, supported by South-South learning, knowledge exchange, and collaboration as a key aspect of the program.

Finally, emerging on what appears to be the subsidence in the COVID-19 pandemic, the project will build alignments to proposed medium- and longer-term strategies outlined in the *GEF's response to*

COVID-19[69]⁶⁸ aimed at addressing the present situation and to enhancing resilience to deal with any new environmental crises which might emerge in the foreseeable future. More specifically, it will build on the proposed medium-term action to develop an internal blueprint on how to deploy ongoing and upcoming projects that can help lay the foundation for a green-blue recovery which emphasizes the identification and integration of the risks and opportunities linked to COVID-19. It will build on the recommended longer-term action to further promote systems change thinking in the strategies to guide GEF's upcoming 8th Replenishment cycle. This provides an opportunity to explore lasting solutions to COVID-19 and other such diseases, which contributes to accelerating transformational change to the human systems, including, *inter alia*; in particular to food, and production and consumption, while ensuring a balance between the use of natural systems and human systems.

5. Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing.

Baseline	Incremental Cost
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Baseline	Incremental Cost
<p>Under the baseline scenario there will continue to be a lack of a coordinated institutional-level approach and mechanism to ensure that knowledge generated from GEF projects implemented in CSIDS can be extracted and transformed to usable Green-Blue learning opportunities for application in policy solutions, and to influence future GEF project development. Notwithstanding the fact that institutions such as the University of the West Indies can serve as important potential nodes for knowledge synthesis and transfer, there will remain under the baseline scenario, no defined standing cooperation framework between the University of the West Indies and organizations serving as implementing and executing agencies for GEF projects to efficiently facilitate knowledge uptake. This will mean that the current situation will persist, where there will be limited ability to sustain the long-term utilization of knowledge products. Under the baseline, knowledge management will remain fragmented and confined to operational context within the projects while they are active. Without expanded engagement of the university in the GEF Partnership in the Caribbean in a knowledge hub capacity the university will likely remain uncommitted to forging deeper linkages, particularly where resource allocations may not be defined.</p>	<p>The GEF investment seeks to put in place a coordinated institutional-level approach and mechanism to ensure that knowledge generated from GEF projects implemented in CSIDS can be extracted and transformed to usable Green-Blue learning opportunities in the overarching context of sustainable land management and land degradation neutrality as an underpinning connecting to interrelated environmental challenges in alignment with the GEF focal areas. The critical contribution through this project will be the piloting of a cooperation framework between the University of the West Indies and organizations serving as implementing and executing agencies for GEF projects to efficiently facilitate knowledge uptake in a more harmonized approach. It is anticipated that this framework will define roles and responsibilities of UWI and key partners and define appropriate modalities to realize sustainability post-project and into the upcoming programming within GEF-8. The project anticipates ensuring that the university becomes recognized as a regional knowledge management hub for the GEF Partnership, serving as a template for replication and upscaling within the Caribbean and at the global SIDS level towards a SIDS-SIDS knowledge management framework which could be used to influence future project development.</p>

Baseline	Incremental Cost
<p>Under a business-as-usual scenario the situation will persist where there will be no demonstrable model and associated methodology for systematic extraction of green-blue learning resources from GEF projects that can be applied to curricula development and accompanying means of effective delivery means to users. Without a methodology for analysis of and extraction of Green-Blue learning elements, the opportunities to learn from ?live? GEF project knowledge capture and demonstration will not feed into the process of curricula development at the university that can in turn contribute not only to GEF project implementation but mainstreaming in communities of practice. Engagement of academia will remain short-term without continued evolution and validation of learning and experiences in a more sustainable way. Under the prevailing baseline there will continue to be limited tailoring potential learning content from GEF projects to current and popular dissemination platforms, avenues that can be expanded within a university setting where youth-oriented approaches may enrich knowledge dissemination and uptake. The baseline will continue to be characterized by relatively limited engagement among technical personnel from GEF Partnership agencies in joint learning opportunities via a KM hub that can be transferred to further project development and execution. The BAU will continue to see limited translation of knowledge gained from projects to inform policy and technical aspects of multilateral environmental agreement negotiations.</p>	<p>The GEF investment will demonstrate a viable model that employs a methodology for the evaluation and sourcing of opportunities for project-based learning based on best practice, extracting these learning opportunities and transformation of into Green-Blue learning elements, along with a means for delivery to student learners at graduate and undergraduate level, but importantly to practitioners and relevant stakeholders. Barbados and Grenada will serve as pilot countries in this effort based on project experiences. The suite of tools from the project learning and transformed into pilot curricula will be subject to a validation process by users within the university and among practitioners. Opportunities will be sought to start embedding replicable content into existing or new course offerings. The project will build on the current limited baseline of GEF project learnings within the university knowledge management system to expand to a range of content that contributes updates on new and emerging technical and policy approaches in green-blue economy development, capitalizing on emerging delivery digital tools and social media platforms. A notable avenue for capitalization will be the advancements made in accessibility to online group meeting and learning platforms that rapidly evolved in functionality and capability as a result of the COVID-19 pandemic. A particularly important consideration in the digital transformation context is the opportunity to cultivate youth-oriented approaches within the university setting to enrich knowledge dissemination and uptake. The project investment will contribute to a closer community of practice among technical personnel from GEF Partnership agencies via the KM hub and will foster improved translation of knowledge to strengthen multilateral environmental agreement negotiations.</p>

Baseline	Incremental Cost
<p>Under the BAU scenario, without a KM hub arrangement there will continue to be relatively limited awareness and means to network among stakeholders to support effective dissemination of Green-Blue tools originating from the GEF project partnership and promote their application. The situation of relatively limited tracking on uptake and application of tools beyond the life of the projects will likely persist without a means to assess utility and application. Importantly there will remain the inability to transfer knowledge across socio-cultural contexts, particularly where language translation is factor that requires consideration. Under the prevailing scenario communication approaches across the GEF project partnership in the Caribbean region will remain rather disjointed with lost opportunity to synergize messaging on common themes that could be otherwise harmonized and facilitated via a KM hub. Under the baseline situation Caribbean SIDS will likely continue to have limited profiling at major events of effective application of knowledge acquired and low capacities in maintaining presence in global arenas.</p>	<p>The baseline scenario will be elevated through the definition of clear communication and stakeholder engagement pathways. The project will raise awareness of the concept of the KM Hub to the GEF Caribbean Partnership and solicit buy-in across sectors. The project will use the learnings developed from the pilot countries Barbados and Grenada (although content developed from regional collaborations involving other countries will be used) to target stakeholders. Emphasis will be placed on securing private sector interests and building coherent linkages to GEF resource programming under the GEF-8 replenishment where tourism, agriculture/fisheries and urban development sectors are of priority under the Green-blue Islands Integrated Program. Through an enhanced communication pathway supported by the project and by extension the hub, there will be a greater ability to track uptake and application of tools beyond the life of the projects within a community of practice. Key to the GEF investment on the baseline will be to ensure there is continued gains made to ensure socio-cultural relevance and that gender considerations are integrated. The project will lessen fragmentation in communication of best practices across the Caribbean GEF project partnership and present a means to better harmonize the messaging on common themes. All this will be extended to showcasing at various regional and global events in collaboration with partners.</p>

6. Global Environmental Benefits (GEFTF) and/or adaptation benefits (LDCE/SCCF)

The project will facilitate CSIDS and other SIDS countries being able to generate GEBs and maintaining the health of the environment through the extraction of knowledge and learning in a systematic manner, including, inter-alia; environmentally sound and innovative technologies, green-blue approaches and climate resilient methods and tools and making them accessible to a wide cross-section of stakeholders. It will contribute to countries' capacities to generate global environmental benefits within the framework of the GEF land degradation, biodiversity, climate change and chemicals & waste focal areas in the context of maintaining the integrity of production in Caribbean landscapes to realize multiple benefits of reducing biodiversity loss, pollution mitigation and enhancing resilience to climate change. The importance of conservation of landscapes in the Caribbean is underpinned by the fact that the region is an ecological hotspot possessing a relatively high proportion of endemism that represents 2.6 percent of the world's 300,000 plant species, and 3.5 percent of the world's 27,298 vertebrate species[70]. The project will contribute to implementing the UNCCD in the scope of its

Strategic Framework 2018-2030, specifically to contribute to enhanced enabling environments to support scaling up and mainstreaming of sustainable land management and land degradation neutrality.

The project will contribute to urgent national imperatives in the target countries of Barbados and Grenada and by extension the Caribbean, that are reflected at the global level in stimulating post COVID-19 recovery of economies and livelihoods using innovative approaches to foster more nature-based solutions in sustainable use of natural resources; the effort to build-back-better on the basis of green-blue learning opportunities. The project will serve as a model and vehicle for SIDS for the development of strategies, plans and policies for implementing Inclusive Green-Blue Economy programmes across sectors, including within civil society and the private sector, as well as strengthening capacities for policy analysis and contributing to the reframing of economic and national development policies along Inclusive Green Economy (IGE), Sustainable Development Goals (SDG) and climate action priorities.

7. Innovation, Sustainability and Potential for Scaling up

Innovation: The project intends to demonstrate several innovative approaches in enhancing sustainability of knowledge transfer and translation into practice in a small island development context. It will be one of the first projects to be implemented in SIDS designed to specifically extract Green-Blue learning from GEF projects implemented by CSIDS via a dedicated, institutional knowledge hub for transformation into curricula, training modules and other platforms for learning. This is intended as an innovative means of enhancing the process of infusing knowledge from best practices into design and implementation of green-blue initiatives and concretely contribute to urgently needed sustainable ?build-back-better? recovery in the aftermath of the COVID-19 pandemic. The central innovative feature of the project is that it provides support for the formalization of a SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub, a long-needed institutional mechanism which has taken almost three decades after the adoption of Chapter 17.G. entitled *Sustainable Development of Small Islands*[71], as part of Agenda 21 and the convening of the First UN Conference on the Sustainable Development of SIDS in Barbados 1994, to have the likelihood of becoming a reality. This project will harness best-practice in policy and technical solutions for learning from prior and current GEF initiatives in Barbados and Grenada as the project target countries, to test the methodology. This will be a positive development which is intended to long-lasting implications for the sustainable development of SIDS, in general. This will provide the basis for the Hub that over time can evolve as a *SIDS-Global Green-Blue Learning Centre of Excellence*.

Sustainability: A number of metrics of sustainability have already been established. The University of the West Indies (Cave Hill) is committed to the establishment of the SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub with a vision toward evolution into a SIDS-Global Green-Blue Learning Centre of Excellence within the framework of a global partnership. This is in line with its *raison d'être*

as a well-established and respected institution of higher learning that already serves the needs of the Caribbean region in knowledge generation, learning, and dissemination. The UWI is fully capable of meeting the needs of stakeholders and the community of practice for GEF project learning beyond its institutional remit, aided by partnership building. A key part of the sustainability model to be explored and developed in this project is the sustainability resource flows to support the continued work of the university within the GEF Partnership so that it is no longer driven via project-by-project engagement. In this regard, the commitment of the member countries (through the GEF Operational Focal Points), GEF Implementing Agencies and Executing partners will need to be secured so that new initiatives are programmed with substantive engagement roles for the university in management of and harmonization of the knowledge management components of projects. A Resource Mobilisation Strategy will be developed and executed by the project that will provide financial sustainability options for long-term operation of the hub.

Scaling?up potential: The implementation of this project offers significant potential for the scaling up of the knowledge management approach to generate global environmental benefits through improved sustainable land and coastal area resource management from Caribbean SIDS to SIDS-Global. This project is being designed as a precursor to the development of a wider regional-scale CSIDS Project on Green-Blue knowledge management that is anticipated to be emulated across global SIDS regions toward the evolution of a SIDS-Global Green-Blue Learning Centre of Excellence. The CSIDS knowledge hub will be connected to other regional and global knowledge management networks not only across environmental specialist interests, but across commercial sectoral areas (tourism, agriculture/fisheries, manufacturing), where the project will define the best modalities for establishing connections and the means of ensuring that knowledge of greatest topical relevance can be easily shared not only within the university learning offerings but also to the wider community of practice. The critical factor to lend toward scaling-up potential is that the knowledge products positioned so that they are demand-driven where learning offerings are certified and contribute to professional accreditation and certification via affiliate partners (professional associations, development partners, etc.). The project will lay the basis for replication to the other SIDS global regions and draw from the successes and learn from the challenges from previous efforts, to ensure the scaling-up achieves permanence. The project anticipates to actively promote the gains from this proof-of-concept to an established modality to be upscaled within the GEF-8 programming.

[1] See Agenda 21, Chapter 17G entitled 'Sustainable development of small islands'

[2] Ibid

[3] <http://www.un-documents.net/sids-act.htm>

[4] Paragraph 62, Barbados Programme of Action

[5] Paragraph 64. A. (i), Barbados Programme of Action

- [6] Paragraph, 64. C. (i) Barbados Programme of Action
- [7] <https://sustainabledevelopment.un.org/samoapathway.html>
- [8] Paragraph 109 (h), SAMOA Pathway
- [9] Paragraph 109 (h), SAMOA Pathway
- [10] CSIDS-SOILCARE Phase1 <https://www.thegef.org/projects-operations/projects/10195>
- [11] <https://www.unep.org/cep/resources/report/socar-report>
- [12] *ibid*
- [13] <https://knowledge.unccd.int/publications/land-degradation-assessment-small-island-developing-states-sids>
- [14] ENSO is one of the most important climate phenomena on Earth due to its ability to change the global atmospheric circulation, which in turn, influences temperature and precipitation across the globe
- [15] Cadogan (2021) Climate change and water ? Are sustainable practices enough to adapt *in* Spotlight on Caribbean Climate, CCCCC <https://joom.ag/brUI>
- [16] https://caricom.org/documents/16630-un_environment_-_the_state_of_biodiversity_in_the_caribbean_community_b5....pdf
- [17] <https://www.cepf.net/sites/default/files/cepf-caribbean-islands-ecosystem-profile-december-2020-english.pdf>
- [18] <https://www.unep.org/cep/resources/publication/marine-pollution-caribbean-not-minute-waste>
- [19] Such a Recovery Strategy has been called for by a number of Fora, including the Forum of Ministers of the Environment for Latin America and the Caribbean in their Decision 8 and the Bridgetown Declaration adopted by the XXII Meeting of the Forum of Ministers of the Environment for Latin America and the Caribbean held on 1-2 February 2021 hosted by Barbados
- [20] Moore, W., Alleyne ,F., Alleyne, Y., Blackman, K., Blenman, C., Carter, S., Cashman, A., Cumberbatch, J., Downes, A., Hoyte, H., Mahon, R., Mamingi, N., McConney, P., Pena, M., Roberts, S., Rogers, T., Sealy, S., Sinckler, T. and A. Singh. 2014. Barbados? Green Economy Scoping Study. Government of Barbados, University of West Indies - Cave Hill Campus, United Nations Environment Programme, 244p. See [-Barbados' Green Economy Scoping Study-2014Barbados GESS study.pdf \(unep.org\)](#)
- [21] *Ibid.*

[22]

https://wedocs.unep.org/bitstream/handle/20.500.11822/34956/Decisions_22.pdf?sequence=1&isAllowed=y

[23] [https://www.thegef.org/sites/default/files/council-meeting-](https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF_C.58_Inf.07_GEF%27s%20Response%20to%20COVID-19.pdf)

[documents/EN_GEF_C.58_Inf.07_GEF%27s%20Response%20to%20COVID-19.pdf](https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF_C.58_Inf.07_GEF%27s%20Response%20to%20COVID-19.pdf)

[24] Ibid

[25] www.ccreec.org

[26] www.gn-sec.net

[27] <https://bloomcluster.com/>

[28] <https://www.gn-sec.net/content/bloom-regional-program>

[29] Antigua and Barbuda, Dominica, Grenada

[30] Publications in this regard, include, *inter alia*:

? Robinson, Justin, Adrian Glean, and Winston Moore. "How does news impact on the stock prices of green firms in emerging markets?." *Research in International Business and Finance* 45 (2018): 446-453.

? Jackman, Mahalia, and Winston Moore. "Does it pay to be green? An exploratory analysis of wage differentials between green and non-green industries." *Journal of Economics and Development* (2021).

? Schuhmann, Peter W., et al. "Visitors? willingness to pay marine conservation fees in Barbados." *Tourism Management* 71 (2019): 315-326.

? Moore, Winston. "An assessment of green export opportunities for Barbados." *CEPAL Review* (2013).

? Niles, Keron, and Winston Moore. "Accounting for environmental assets as sovereign wealth funds." *Journal of Sustainable Finance & Investment* 11.1 (2021): 62-81.

? Moore, Winston, Stephano Pereira, and Shamika Walrond. "Comparative Advantage and Green Goods in the Caribbean." *Social & Economic Studies* (2015): 59-90

[31]

https://wedocs.unep.org/bitstream/handle/20.500.11822/34956/Decisions_22.pdf?sequence=1&isAllowed=y

- [32] https://sustainabledevelopment.un.org/content/documents/20630San_Pedro_Declaration_Revised_AT.pdf.
- [33] <https://www.un-page.org/>
- [34] <https://www.un-page.org/Barbados%20Country>
- [35] Griffith, M.D., Feasibility Study of the Establishment of a SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub. Prepared for the The University of the West Indies, Cave Hill Campus, Office of the Deputy Principle; CaribInvest West Indies, Limited, June 2021.
- [36] <https://www.unep.org/cep/what-we-do/communication-education-training-and-awareness-ceta>
- [37] <http://www.gefcrew.org/>
- [38] <https://www.iweco.org/>
- [39] https://caricom.org/documents/4906-revised_treaty-text.pdf
- [40] https://caricom.org/wp-content/uploads/capacity_building_mea_project_document.pdf
- [41] <https://www.oecs.org/en/our-work/knowledge/centre>
- [42] <https://pislmsids.org/>
- [43] <https://hub.canari.org/>
- [44] <https://www.thegef.org/what-we-do/topics/gef-kaleo>
- [45] <https://www.thegef.org/what-we-do/topics/knowledge-learning>
- [46] <https://iwlearn.net/>
- [47] <https://www.greengrowthknowledge.org/initiatives/gef-islands>
- [48] <https://www.cbd.int/chm/>
- [49] <https://bch.cbd.int/en/kb/tags/about/What-is-the-Biosafety-Clearing-House-BCH-/619c553658029700017ff43b>
- [50] <https://absch.cbd.int/en/>
- [51] <https://knowledge.unccd.int/home/about-knowledge-hub>
- [52] <https://www4.unfccc.int/sites/NWPStaging/pages/About.aspx>
- [53] <https://www.unep.org/publications-data>

- [54] <https://www.unep.org/explore-topics/education-environment/what-we-do/earth-school>
- [55] https://wedocs.unep.org/bitstream/handle/20.500.11822/26515/BuenosAires_Declaration.pdf?sequence=2&isAllowed=y
- [56] <https://www.unep.org/pt-br/node/23747>
- [57] https://www.ilo.org/asia/media-centre/news/WCMS_760830/lang--ja/index.htm
- [58] <https://www.fao.org/americas/publicaciones-audio-video/en/>
- [59] <https://www.fao.org/americas/programas-y-proyectos/en/>
- [60] <https://www.latinamerica.undp.org/content/rblac/en/home/sustainable-development.html>
- [61] <https://www.unitar.org/learning-solutions>
- [62] <https://www.unep.org/resources/report/redd-academy-learning-journal>
- [63] Bodosca, S and Streimikiene, D.; Cradle to Cradle: A Step Further for Sustainable Development in Tourism, *Transformations in Business and Economic*, Vol, 14, No. 2B (35B), 2015, pp. 548-556.
https://www.researchgate.net/publication/286192282_Cradle_to_Cradle_a_Step_Further_for_Sustainable_Development_in_Tourism
- [64] The *Programme of Action on the Sustainable Development of Small Island developing States* (commonly referred to as the *Barbados Programme of Action* (BPOA)); the *Mauritius Strategy for the Further Implementation of the BPOA* (MS/BPOA) and the *SIDS Accelerated Modalities of Action Pathway* (Commonly referred to as the SAMOA Pathway).
- [65] <https://qcat.wocat.net/en/wocat/>
- [66] https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.E_C59_04_evaluation_of_KM_GEF_2020.pdf
- [67] <https://www.gefio.org/evaluations/scce-sids>
- [68] https://www.thegef.org/sites/default/files/documents/2022-01/GEF_R.08_17_GEF-8_Programming_Directions.pdf
- [69] https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF_C.58_Inf.07_GEF%27s%20Response%20to%20COVID-19.pdf
- [70] https://www.cepf.net/sites/default/files/caribbean_ep_summary.pdf
- [71] Chapter 17G of Agenda 21 that refers to *Sustainable development of small islands* in the context of Scientific and technical means recommends that (17.133) *Centres for the development and diffusion*

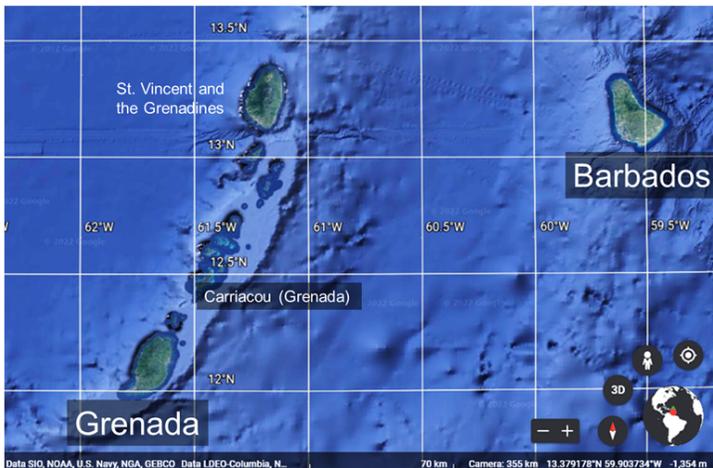
of scientific information and advice on technical means and technologies appropriate to small island developing States, especially with reference to the management of the coastal zone, the exclusive economic zone and marine resources, should be established or strengthened, as appropriate, on a regional basis.? <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.



<https://www.nationsonline.org/oneworld/map/Caribbean-political-map.htm>



2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

Stakeholders	Roles in Project Preparation and means of engagement during PPG
Ministry of Environment and National Beautification, Barbados	Lead technical contributor in project design. Focal Point for the PAGE-Barbados Programme from which project design direction is being built based on recommendations from the programme. Provision of overall policy and technical guidance and ensuring congruence with the relevant decisions of the XXII LAC Forum of Ministers (given Barbados' role as President of the Forum) in the shaping the proposal.
Ministry of Climate Resilience, The Environment, Forestry, Fisheries, Disaster Management and Information, Grenada	Lead technical contributor in project design. Provision of overall policy and technical guidance.
University of the West Indies ? Cave Hill Campus, through the SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub	Lead technical contributor in project design and technical backstopping for the PAGE-Barbados Programme. Provide core guidance in proposal development; lead the liaison with stakeholders in consensus in the project final design.
University of the West Indies ? Mona Campus, Jamaica ? St. Augustine Campus, Trinidad and Tobago ? UWI Five Islands (Antigua and Barbuda)	Supporting technical contributors to UWI Cave Hill Campus Lead in project design and technical backstopping for the overall initiative; provide cross-disciplinary inputs and guidance on proposal development from stakeholders in the resident countries.
The Office of H.E.Ambassador of Barbados to Belgium, France, Germany, Luxembourg, The Netherlands and the European Union Embassy of Barbados, BELGIUM	Advisory support to the project proposal development and the provision of Liaison with SIDS representatives within the context of the ACP Group and with the European Union related organizations. To be engaged through direct bilateral discussions.

<p>United Nations Coordination Office for the PAGE-Barbados Programme</p>	<p>Advisory support to the project proposal development. Focal Point for the PAGE-Barbados Programme and establishing link between UNITAR and UWI-Cave Hill Campus in mobilizing initial investment for the Feasibility Study for the SIDS-SIDS Green Economy Knowledge Transfer Hub; identification of opportunities for support through GEF Partnership. To be engaged through direct bilateral and group discussions.</p>
<p>Private Sector (further elaborated at PPG)</p> <ul style="list-style-type: none"> ? Barbados Chamber of Commerce ? Export Barbados ? Barbados Private Sector Association ? Barbados Hotel and Tourism Association ? Caribbean Export and Development Agency ? Grenada Chamber of Commerce and Industry ? Grenada Industry and Development Corporation ? Grenada Hotel and Tourism Association 	<p>Inputs in project design in context of private sector industry knowledge management needs around blue-green appropriate technology uptake and application on various themes (resource efficiency, pollution mitigation, sustainable land management among others). Provision of advisory inputs on preferred modes of knowledge access, capacity building modalities, avenues for widened private sector engagement, means of assessing efficacy and providing feedback, long-term sustainability options and strengthening industry partnerships. To be engaged through direct bilateral and group discussions.</p>
<p>Caribbean Community Secretariat (CARICOM) Secretariat</p>	<p>Advisory support in project design in networking with ongoing KM efforts in the CARICOM Region. To be engaged through direct bilateral and group discussions.</p>
<p>Caribbean Development Bank (CDB)</p>	<p>Advisory inputs in project design on sustainable financing options through partnerships with Bank-financed initiatives and partners to support the work of the Hub in the long-term. To be engaged through direct bilateral and group discussions.</p>
<p>Cartagena Convention Secretariat, Caribbean Regional Seas Programme</p>	<p>Consultative inputs related to learning from relevant regional GEF projects (mainly in International Waters) in the Convention area and opportunities for adaptation along project learning modalities and the GEF IW-LEARN. To be engaged through direct bilateral and group discussions.</p>
<p>Organization of Eastern Caribbean States (OECS)</p>	<p>Advisory support in project design in networking with ongoing KM efforts in the Eastern Caribbean sub-region under ongoing and planned initiatives. To be engaged through direct bilateral and group discussions.</p>

Partnership Initiative on Sustainable Land Management (PISLM)	Advisory support in project design in networking with ongoing KM efforts in implementation of the UNCCD within the Caribbean partnership. To be engaged through direct bilateral and group discussions.
Banco de Desarrollo de América Latina (CAF)	Advisory inputs in project design on sustainable financing options through partnerships with Bank-financed initiatives and partners to support the work of the Hub in the long-term. To be engaged through direct bilateral and group discussions.
Alliance of Small Island States (AOSIS) Secretariat	Advisory support in project design in networking with ongoing KM efforts across SIDS regions. To be engaged through direct bilateral and group discussions.
The United Nations Institute for Training and Research (UNITAR)	Consultative inputs in project design. Initial investment for undertaking of the feasibility study for the SIDS-SIDS Green Economy Knowledge Transfer Hub on which the project document is built. To be engaged through direct bilateral and group discussions.
United Nations Environment Programme (UNEP), Latin America and Caribbean Office	Concept preparation. Facilitating consultative inputs from other GEF teams working in the Caribbean and within the organization on experiences with KM. This includes the Cartagena Convention Secretariat. To be engaged through direct bilateral and group discussions.
United Nations Industrial and Development Organisation (UNIDO)	Inputs regarding the involvement of the Global Network of Regional Sustainable Energy Centres (GN-SEC) covering 36 of 38 SIDS and facilitating south-south and triangular cooperation on joint sustainable energy issues and solutions (e.g. flexible power grids, ocean energy, electric mobility, climate resilient energy planning). To be engaged through direct bilateral and group discussions.
UN Office of the High Representative for the LDCs, LLDCs and SIDS (UN-OHRLLS)	Advisory support in project design in networking with ongoing KM efforts across SIDS regions. To be engaged through direct bilateral discussions.
United Nations Department of Economic and Social Affairs (UNDESA)	Advisory support in project design in networking with ongoing KM efforts across SIDS regions. To be engaged through direct bilateral discussions.
Foundation for Research Innovation Enterprise Entrepreneurship Training and Development in the OECS (FRIEETAD)	Consultative inputs in project design and networking with ongoing KM efforts in the OECS Sub-region. To be engaged through direct bilateral and group discussions.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

The project design will follow the GEF *Guidance to Advance Gender Equality in GEF Projects and Programs* (2018)[72] and incorporate gender-disaggregated indicators to measure and report on the gender equity in participation in project activities, both at the advisory and at the implementation levels. Indicators will also be developed to track contributions at the results/outcome level in the context of how knowledge is generated and applied in uptake at the beneficiary level. The project preparation phase will ensure participation of a wide range of stakeholders that are active in promoting, seeking benefits and safeguarding gender-based rights. Roles for these partners will be identified across the three components in the project design so that gender sensitive perspectives are incorporated in the final project document. The PPG phase also will identify specific areas where gender diversity is key with respect to leadership roles in the implementation process.

At the regional level, existing overarching frameworks will be referenced to guide the integration of gender equality, women's empowerment and the participation of indigenous peoples into the project. One such framework is the 1997 *Charter of Civil Society*[73] for the Caribbean Community (CARICOM) adopted by the Conference of the Heads of Government of the Caribbean Community, along with a Memorandum of Understanding signed between the CARICOM Secretariat and UN-Women on *Gender Equality and the Empowerment of Women* (2017)[74] to support the Community's work on gender and regional statistics. The scope of the MOU includes collaboration in provision of Caribbean-wide data, statistics and analysis on the implementation of the gender dimensions of the Sustainable Development Goals (SDGs) and the SIDS Accelerated Modalities of Action known as the SAMOA Pathway. The recently developed OECS Commission Gender Policy (2022)[75] will also be used as a reference for the project. This policy guidance, although designed within the scope of the OECS Members States of which Barbados is not a part, will be useful to strengthen gender considerations to be taken into account under the project. The policy statement considers integration and mainstreaming of gender in the OECS's policies and in its programming work with the countries. The Institute for Gender and Development Studies of the UWI will be expected to play a key advisory role in project design and execution.

[72]

https://www.thegef.org/sites/default/files/publications/GEF_GenderGuidelines_Dec2018_CRA_web.pdf

[73] https://caricom.org/document/12060-charter_of_civil_society.pdf

[74] <https://caricom.org/caricomun-women-sign-mou-on-gender-equality-empowerment/#:~:text=The%20MOU%20on%20Gender%20Equality,known%20as%20the%20SAMOA%20Pathway.>

[75] <https://oecs.org/en/our-work/knowledge/library/gender/oecs-commission-gender-policy>

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources;

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

Private sector engagement is at the core of the project given that they are among the primary beneficiaries in uptake and replication of solutions made accessible through the knowledge management hub in transformation processes to an inclusive green-blue economy and help hasten COVID-19 pandemic economic recovery. The project, in formalizing the SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub is anticipated to pilot the approach in establishment of a proposed *Private Sector Development Knowledge Programme and Transfer Partnership* that will facilitate the transfer of knowledge and technology and the spread of technical and business skills to micro-, small- and medium- sized enterprises as a means of facilitating and enhancing green-blue economy business-relevant research, business development and training. These activities will also

facilitate increased innovation in a SIDS context around maintaining a healthy environment and delivery of GEBs. The work initiated under the PAGE-Barbados Programme in addition to other projects will serve as a springboard for engagement of private sector that had already been targeted under the programme, including, *inter alia*; the Barbados Chamber of Commerce, Export Barbados, Barbados Private Sector Association, Barbados Hotel and Tourism Association, Caribbean Export and Development Agency, etc. In Grenada some of the private sector organizations that have been engaged with GEF project learning include, *inter alia*; Grenada Chamber of Commerce and Industry, Grenada Industry and Development Corporation, Grenada Hotel and Tourism Association. The project will ensure that learning products are based on demand-driven needs underpinned by means of cost recovery that will aid in sustained development of relevant course offerings and knowledge products. The project will foster a model that works on enhancing already existing capacity building programmes that are offered through private sector associations. These modalities will be further explored in the PPG phase of project development.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Risk	Risk level	Mitigation Measures
Low buy-in across stakeholders	Medium	Engage early in broad-based awareness raising to gain consensus on best approaches with lead collaborating agencies and stakeholder groups including with other UWI campuses and affiliated centres of excellence/ knowledge centres. Define and clearly craft out roles and clear deliverables among partners based on demonstrable gains from investment in the project. Ensure early outreach to engage key agencies from other SIDS regions in the planning/development process toward execution.
Lack of buy-in or low perceived relevance by private sector	Medium	Formulate early in the project development process the business case for value the knowledge hub can provide in terms of the range of potential services and how this may translate to improved and cost-effective practices that are also environmentally sustainable. Need to institute awareness-raising based on promising opportunities that have already emerged under the PAGE-Barbados programme and relevant engagements in Grenada to demonstrate how the project will translate knowledge to practice.
Limited buy-in from governments (GEF Operational Focal Points and national collaborators)	Medium	Expand early buy-in from the Caribbean GEF OFPs to shape the design of the project and ensure that the proposed modalities of the project meets expected needs.

Risk	Risk level	Mitigation Measures
Challenges in coordination among the GEF partnership (project implementing agencies and key executing partners)	Low	Ensure a good institutional mapping in the PPG phase and define entry points for best practice project initiatives that will be used to demonstrate the methodology for extracting green-blue learning elements. Ensure there is a well-defined, routine consultation process to engage these agencies within the Caribbean GEF Partnership framework.
Limited flow of financial resources to sustain the SIDS-SIDS Green-Blue Knowledge Transfer Hub in the medium and long term.	Medium	Develop as part of the PPG phase a Resource Mobilisation Strategy to be implemented within the project. This will entail the conceptualisation and development of bankable Knowledge-Based projects and programmes for implementation by the Hub.
Imposition of COVID19 transmission mitigation measures (if crisis situation persists) and associated disruptions; challenges potentially related to post-pandemic economic recovery in terms of changing policy and priorities, personnel and material deployment	To be determined	The full extent of the impact of the COVID19 Pandemic is not yet known nor is the influence it may have in the coming period when the project is expected to be implemented. The international travel restrictions, although now relaxing, may have implications for moving human resources/expertise that are required to support project implementation. The pandemic has had implications for resource deployments at the government level, along with the other project partners in response to the economic fallout, that could have prolonged impacts in terms of implementation and co-financing commitments. The project design phase will need to consider how the course of the pandemic unfolds in the country and at the global level. The GEF COVID-19 guidance on project design will be followed in assessing and designing to account for critical issues including <i>inter-alia</i> , possible re-instatement of COVID-19 containment measures, change in capacity of stakeholders, changes in the baseline, change in conditions of beneficiaries and processes for stakeholder engagement.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

The University of the West Indies (Cave Hill Campus) will be the project Executing Agency, with the Office of the Deputy Principle designated with overall project management responsibility. A Project Cooperation Agreement (PCA) will be issued by UNEP to UWI to establish this execution function, with provision of financial resources. A Project Steering Committee (PSC) comprising of relevant agencies will oversee the project implementation. The Chair of the PSC will be a designate of UWI. The day-to-day project management functions related to the project will be undertaken by the Director of the SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub who will also serve as the Project Manager for the Project, who will be responsible for all technical and financial reporting. The Project Manager will be supported by a Research & Development (Ecosystem-Based Adaptation) Specialist, a Communication & Education Specialist and an Administrative Assistant.

The project will be directed by a Project Steering Committee (PSC) comprised of representatives from Barbados and Grenada, UWI, CARICOM Secretariat (Sustainable Development Desk), the OECS Commission Secretariat, UNITAR, PISLM. The PSC will include a gender specialist from among the representative agencies, to ensure that the gender considerations are fully mainstreamed within project management and carries over to technical execution in terms of accessibility and uptake of outputs and ensuring that the monitoring and evaluation framework of the project is appropriately gender-sensitive. The full complement of the PSC will be defined during the PPG phase. The PSC will convene on a six-month basis to review workplan execution and reporting outputs, decide on project directions and integration within national and regional frameworks with the aim of having a permanent knowledge management hub as a coordinating mechanism by the end of the project that sustains participation of the relevant stakeholders of the GEF Partnership. The technical backstopping of the project will be performed by the Scientific and Technical Knowledge Transfer Advisory Group (ST-KTAG) in its capacity as the advisory body to the project. The ST-KTAG will lead and oversee *inter-alia* the roll-out of the proposed methodologies in establishment of the hub and validation of the results with proof-of-concept testing with beneficiaries and stakeholders, review and screen learning opportunities for curricula development, consolidate knowledge products, explore and expand learning partnerships within the GEF Partnership community of practice, capture the generation of new knowledge, including the application and deployment of new technologies and scientific developments. The ST-KTAG will also evaluate proposals and approaches for financial viability of the Hub and will include representation from finance organizations (e.g. Caribbean Development Bank). The composition of the ST-KTAG will be determined during the PPG phase.

UNEP in capacity as Implementing Agency will have a seat on the PSC and be recipient of substantive technical reports (half-year, and annual Project Implementation Review reports) and quarterly financial reports. The PSC shall appoint as required, technical working groups (based on agreed TORs) to oversee and ensure technical quality of outputs. The PMU will ensure annual financial audits of

expenditure conducted and contribute to the conduct of a mid-term review and terminal evaluation, with engagement of the PMU and beneficiary stakeholders.

Coordination with other relevant GEF-financed projects and other initiatives: While all GEF projects have knowledge management components from which lessons may be derived, there are three projects of relevance that are dedicated to knowledge management currently under implementation that includes Caribbean countries, and one which about to commence which has a significant knowledge management component for which significant synergies can be developed. The first two projects are expected to provide replicable models and approaches that may be emulated. These are: **(1)** GEF IW:LEARN 5: Supporting Portfolio Coordination Within and Beyond the International Waters Focal Area, particularly in Small Island Developing States, Through Knowledge Sharing, Information Management, Partnership Building and Programmatic Guidance Services is co-implemented by UNDP and UNEP with Intergovernmental Oceanographic Commission of UNESCO as the Executing Agency. The project aims to facilitate replication of good practice across GEF International Waters projects, including projects across all focal areas in SIDS, working in collaboration with development partners, supporting the delivery of training information management, providing programmatic guidance and facilitating partnership building. Component 1 is most relevant; it will contribute targeted knowledge sharing and results showcasing across projects and development partners to advance transboundary water management in all IW Focal Area ecosystems; **(2)** GEF Implementing Sustainable Low and Non-Chemical Development in SIDS (ISLANDS) - Communications, Coordination and Knowledge Management Project, implemented by UNEP and executed by the Green Growth Knowledge Partnership. The project seeks to coordinate, communicate, and manage knowledge from ISLANDS Programme to amplify the results of ISLANDS child projects throughout each region resulting in the Programme being more than the sum of the parts of the individual projects. Component 2 is relevant to this proposed project that aims to provide information and opportunities for exchange among SIDS governments and other SIDS stakeholders to take action technically, legally and through partnerships. **(3)** Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDS-SOILCARE Phase 1) has a significant Knowledge Management component for which beneficial synergies can be built with the Hub. It should be noted that these projects account for gender-sensitivity based on the GEF *Guidance to Advance Gender Equality* (2018) and this project will ensure congruency in approach to integrate gender considerations.

Partnership for Action on Green Economy (PAGE) Programme-Barbados: Barbados joined the PAGE Programme in 2016 to lend support implementation of the NSP and of other green (and blue) economy objectives with focus on thematic areas such as green and blue jobs, youth engagement, green industry, and strengthening individual and institutional capacity for integrative green (and blue) growth (IGE). This is against the policy and commitments to sustainable development through social compacts with the private sector and trade unions, strategic frameworks, such as the National Sustainable Development Policy, and National Strategic Plan (2006-2025)?(NSP). In post-COVID-19 recovery the PAGE Programme will support efforts in the economic recovery strategy, boosting the circular

economy and promoting green consumption and production practices as a key way forward. A key anchor-point to this project concept is the recent agreement between UWI and the Government on the development of a Green and Blue Economy Learning Programme that is informed by the feasibility study on the establishment of the SIDS-SIDS Green?Blue Economy Knowledge Transfer Hub.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions?

Yes

If yes, which ones and how: NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

National priorities Barbados: (1) Barbados' *First National Communication to the United Nations Framework Convention on Climate Change* was prepared and submitted to the UNFCCC Secretariat in 2001. That report contained an assessment of Barbados' vulnerability to the potential impacts of climate change, an inventory of greenhouse gases produced nationally, strategies for the abatement of greenhouse gases, and recommended policies and actions for responding to global climate change. The *Second National Communication (SNC)* (2018)[76] identifies the environmental and socio-economic vulnerabilities to climate change, practices and measures to climate change facilitate adaptation and mitigation and uncertainties and limitations within the assessment methodology, notably in terms of data accuracy and accessibility. The SNC highlighted actions related to technology transfer and knowledge in context of meeting the reported GHG emissions reduction targets and adaptation needs. Specifically, it acknowledged efforts related to small island renewable energy knowledge and technology in respect to a collaboration between UWI and universities from Germany, Fiji and Mauritius on an information exchange and networking initiative called the Small Developing Island Renewable Energy Knowledge and Technology Transfer Network (DIREKT) project. (2) The *National Biodiversity Strategy and Action Plan* (2020)[77] addresses weakness in knowledge management associated with management of biological resources. In this regard, the NBSAP strategic targets aim to *inter-alia*, to increase participation of stakeholders in data collection and dissemination, supported by the development of a platform for access, storage, dissemination and application of knowledge and that all traditional and scientific knowledge and technology relating to biodiversity is widely and equitably shared, transferred and applied. The NBSAP recommends that the Ministry of Environment develop an environmental knowledge management system to document and make accessible the results of varied research and development efforts in the country. (3) The *First and Second National Reports to the UNCCD* as well as the *National Action Programme (NAP) to Combat Desertification and Land Degradation and to Mitigate against the Effects of Desertification, Land Degradation and Drought*[78] have been submitted. The NAP (2002) is the culmination of a national consultation process which identified the constraints to effective control of land degradation and developed action plans to address these constraints in the three thematic areas of agriculture, settlement, and resource use and conservation. Strategic elements related to knowledge management include the development, documentation and protection of local, knowledge and practices with respect to hard and soft engineering solutions and other approaches to address land degradation and mitigate

against the impacts of land degradation and drought. **(4)** The *National Strategic Plan of Barbados 2006-2025*[79] presents *Goal Four on 'Building a Green Economy - Strengthening the Physical Infrastructure and Preserving the Environment'* that focuses on the objectives of sustainable renewable resource use and natural resources, maintaining a safe and reliable water supply, an efficient and reliable energy sector, transport system and infrastructure, improvement of disaster management and developing and maintaining an efficient land-use policy. All these objectives have associated knowledge management and related capacity building needs.

National priorities Grenada: **(1)** Under obligations of the UNFCCC the country submitted its *National Adaptation Plan (NAP) 2017-2021*[80] and its first and second Nationally Determined Contribution (NDCs). Under the NAP, priority is given to improving the understanding of and knowledge about climate impacts, vulnerabilities, risks and resilience (e.g. green building) options. Recognition was given to the challenge of knowledge continuity among government staff related to adaptation efforts between administrations, needed emphasis on traditional knowledge to assess climate-related impacts to supplement gaps in formal data records. **(2)** The *National Biodiversity Strategy and Action Plan 2016-2020*[81] highlights knowledge gaps and capacity needs related to access to applicable tools and methodologies such as application of spatial assessment technologies for disaster risk reduction, landscape and natural resource assessments, technologies for genetic analysis of biodiversity and genetic modified organisms among others. **(3)** The UNCCD *Aligned National Action Programme for the State of Grenada* (2015)[82] specifies Operational Objective 3 on Science, Technology and Knowledge where it advocates for changes that will position Grenada to become a leader on scientific and technical knowledge pertaining to land degradation and drought mitigation. The *Land Degradation Neutrality National Report* (2015)[83] cited inadequate knowledge among the indirect drivers of land degradation in the country, and underscored the application of knowledge of biophysical, climatic and socio-economic factors contributing to land degradation and drought mitigation among the key strategic implementation actions to achieve the set voluntary land degradation neutrality (LDN) target. The report further recommends that a Documentation and Knowledge Management Centre be created that would consolidate relevant data to inform all aspects of land use for sustainability of livelihoods, water and food security. **(4)** The *National Sustainable Development Plan (NSDP) 2020-2035*[84] within the frame of knowledge management, lays out National Strategic Actions that highlights the challenge of inadequate use of technology, and proposes the establishment of a technology institute and an institutional framework to support Grenada's transition to a knowledge-based digital economy and society and to build its human capital.

United Nations Cooperation Framework: The United Nations coordinated support to Barbados and Grenada is under a *UN Multi-Country Sustainable Development Framework (MSDF)*. The 2017-2021 UN MSDF in the Caribbean[85] includes Priority Area 4 'A Sustainable and Resilient Caribbean' which is relevant to the objectives under this project. Under this priority area the UN system will support coherent efforts to strengthen the resilience of the Caribbean and its peoples by mitigating the effects of climate change, disasters and environmental degradation in the context of sustainable development, livelihoods, and the economies. The anticipated relevant outcome is 'Inclusive and sustainable solutions adopted for the conservation, restoration and use of ecosystems and natural resources.'

The Office of the UN Resident Coordinator with responsibility for Barbados and Grenada (Multi-Country Office (MCO)) covers the Barbados and the Eastern Caribbean. UNEP, through its Caribbean Sub-Regional Office (CSRO) participates in the UN Sub-regional Team (UNST) and works to ensure UNEP-led initiatives align with the Multi-Country Sustainable Development Framework (MSDF). During project implementation, UNEP's CSRO will be kept in close communication to facilitate as relevant and necessary, avenues for building synergies between related initiatives. The CSRO will be furnished with key reports that will include *inter-alia*, annual progress implementation reviews, mid-term reviews and terminal evaluation reports for feedback particularly related to ensuring coherence with wider UN-led initiatives within the Caribbean region. The UN Resident Coordinator's Office has been advised in parallel with the formulation of the project and feedback will be incorporated into further drafts of the project documentation and appropriately incorporated into governance arrangements at implementation.

Beyond the national priorities for SIDS, outlined above, this project will contribute significantly to the fulfillment of not only CSIDS priorities, but those of SIDS, in general. In this regard, it reaffirms that small island developing states remain a special case for sustainable development in view of their unique and particular vulnerabilities and that they remain constrained in meeting their goals in all three dimensions of sustainable development, without the assistance of the international community. In addition, the knowledge which is generated through this intervention will go a long way in helping CSIDS in extracting and applying green-blue learning tools and technologies which are adaptable to the SIDS's realities. It will also contribute in strengthening SIDS-SIDS inter- and intra-regional collaboration.

[76]

https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/4693851_Barbados-NC2-1-Barbados%20SNC%20FINAL%20April%202018.pdf

[77] <https://biodiversity.gov.bb/resources/chm/national-biodiversity-strategy-and-action-plan-2020/>

[78] <https://www.unccd.int/sites/default/files/naps/barbados-eng2001.pdf>

[79] https://www.un-page.org/files/public/barbados_national_strategic_plan_2006-2025.pdf

[80] https://unfccc.int/sites/default/files/resource/Grenada_NAP_%202017-2021.pdf

[81] <https://www.cbd.int/doc/world/gd/gd-nbsap-v2-en.pdf>

[82] https://knowledge.unccd.int/sites/default/files/naps/2021-03/Grenada%20Aligned%20National%20Action%20Programme_withcommsplan.pdf

[83] https://knowledge.unccd.int/sites/default/files/ldn_targets/grenada-ldn-country-report.pdf

[84] <https://gov.gd/sites/default/files/docs/Documents/others/nsdp-2020-2035.pdf>

[85] https://unsdg.un.org/sites/default/files/cf-documents/9bea30e0-f553-49d6-ac99-3c50989acaa6_UN-MSDF-2017.pdf

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

This project is in totality a Knowledge Management Initiative with focus on the generation, organization, storage, dissemination and uptake to practice of policy and technical knowledge generated from the GEF Partnership, via a regional knowledge hub mechanism. The project intends to address the perpetual cycle of loss of retention of project knowledge, and limited transferability and uptake into demonstrated practice among intended beneficiaries in the long-term; in other words, shift from a project-by-project cycle in how knowledge is generated and used, to a more permanent programmatic approach. This project is being framed against observations and core recommendations from the GEF Independent Evaluation Office (IEO) that there remain deficiencies in capturing data and information at the project level and enhancing subsequent use and that regional programs should encourage a transfer of knowledge to the poorest SIDS through a South-South capacity-building approach. The project will build on already emerging efforts of the University of the West Indies in strengthening the mechanism and methodology for sustained green-blue knowledge management, building on experiences from the PAGE-Barbados Programme, supported by UNITAR. This existing approach lends itself well for building out and scaling up to incorporate the GEF Partnership in the Caribbean where this project intends to contribute to catalyzing the establishment of the knowledge hub within under university umbrella and strengthen the regional and international organizational collaborations that are needed, with options to guarantee long-term sustainability of operation of the Hub. The project will test and demonstrate a proof-of-concept through a defined methodology for extraction of green-blue project learnings from GEF initiatives executed in Barbados and Grenada (as core countries) in addition to other countries in the region, and transformation to curricula and learning resources. These resources will be tested within the university community and project beneficiaries to validate not only the approach, but the content, relevance, suitability of access and transferability to practice. Given the strong private sector user orientation established under the PAGE-Barbados Programme, assessment of utility of the approach in the context of green-blue post-COVID-19 pandemic economic recovery will be paid special attention. The project is expected to build the platform for the eventual establishment of a SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub to be anchored within a wider scaling up under the upcoming GEF-8 programming, specifically under the Green-Blue Islands Integrated Program. The project will be executed within the GEF Partnership framework in the Caribbean, with close inputs from technical and policy specialists across the GEF focal areas, drawing on regional and global projects that have made significant advancement in knowledge management or are executing dedicated knowledge management standalone initiatives, for example GEF-IWLEARN 5 Project and the GEF-ISLANDS (chemicals and waste) - Communications, Coordination and Knowledge Management Project. The approaches developed from

this project as relates to the SIDS sustainable development will be made accessible for learning and policy analysis purposes and will aid in enhancing understanding and awareness among beneficiaries about Green-Blue learning strategies which can be employed in future project development.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approva I	MTR	TE
Low			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

This project seeks to demonstrate the viability of a sustainable mechanism for the extract of Green Learning and Knowledge from GEF projects for integration in academia and communities of policy and technical practice within SIDS, through a dedicated SIDS-SIDS Green-Blue Environmental Knowledge Transfer Hub. This will be done through three (3) project components; Component 1: Establishment of a SIDS-SIDS Green-Blue Environmental Knowledge Transfer Hub as a formalized mechanism that will support the institutionalization of a SIDS-SIDS Green-Blue Knowledge Transfer Hub (KTH) and ICT solution, to be supported by institutional cooperation agreements for operationalisation of the Hub, and cooperation agreements for operationalisation of a Technical Assistance Programme (SIDS/K-TAP) with SIDS partner agencies. Component 2: Development of a demonstration model for extracting learning from GEF Projects into Green-Blue learning curricula formats for sectoral application will deliver a methodology for analysis of, and extraction of Green-Blue learning elements from GEF projects implemented in CSIDS, development of curricula learning elements extracted from these GEF projects and pilot phase delivery of these curricula/learning elements to be tested and validated by target learners and users. This component will include a pilot ambassadorial knowledge transfer initiative. Component 3: Enhancement of sustainability and scale-up will deliver a marketing, outreach and communication strategy and accompanying suite of

knowledge products for uptake by target stakeholders and marketplace events alongside major regional and global events (CC, UNCCD, CBD, GEF Councils) for promotion of the KT Hub to wider partnership.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
CRC SRIF Knowledge Hub_am	

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Charley Browne	GEF Operational Focal Point	Ministry of Environment and National Beautification, Barbados	4/6/2022
Kelvin George	GEF Operational Focal Point	Ministry of Finance, Planning, Economic Development and Physical Development, Grenada	3/14/2022

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place



<https://www.nationsonline.org/oneworld/map/Caribbean-political-map.htm>

