GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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General Project Information

Project Title
Promoting the Integrated Management of Sargassum: Building Resilient Tourism and Fisheries Sectors through the Conservation of Marine Ecosystems in Caribbean countries (SargMarine)

Region	GEF Project ID
Regional	11526
Country(ies) Regional Colombia Trinidad and Tobago Panama Dominican Republic St. Lucia Grenada Jamaica	Type of Project FSP
GEF Agency(ies): CAF	GEF Agency ID CAF-GEF /37
Executing Partner Organization of American States (OAS)	Executing Partner Type CSO
GEF Focal Area (s) International Waters	Submission Date 3/19/2024

Project Sector (CCM Only)
Taxonomy
Focal Areas, Stakeholders, Gender Equality, Capacity, Knowledge and Research, Influencing models

Type of Trust Fund	Project Duration (Months)
GET	60
GEF Project Grant: (a) 10,000,000.00	GEF Project Non-Grant: (b) 0.00
Agency Fee(s) Grant: (c) 900,000.00	Agency Fee(s) Non-Grant (d) 0.00
Total GEF Financing: (a+b+c+d) 10,900,000.00	Total Co-financing 76,300,000.00
PPG Amount: (e)	PPG Agency Fee(s): (f)

300,000.00	27,000.00
PPG total amount: (e+f) 327,000.00	Total GEF Resources: (a+b+c+d+e+f) 11,227,000.00
Project Tags CBIT: No NGI: No SGP: No Innovation: Yes	

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B "project description".(max. 250 words, approximately 1/2 page)

For over a decade coastal regions in the Caribbean Sea Large Marine Ecosystem (CLME) have been grappling with an escalating environmental challenge - the unprecedented influx of sargassum seaweed. Proliferation of sargassum is causing substantial ecological, economic, and social impacts on coastal communities and marine ecosystems, especially affecting local fisheries and tourism industries[1][1]. In response to this situation, various platforms have been established, such as CARICOSS, the Sargassum Online Forum, and the Sargassum Information Hub, among other projects financed by international agencies. However, coordination among initiatives remains weak, focused on national approaches that overlook the problem´s transboundary nature.

In this context, the SargMarine project will establish a multi-level regional governance framework for the integrated management of sargassum to reduce its impacts on marine ecosystems, communities' livelihoods and local industries (tourism and fisheries) from CLME countries. The project endorses the IW-Program priorities and is aligned to strategic frameworks such as the Cartagena Convention, SPAW Protocol and the recent Nassau Declaration, among other key instruments.

The project targets seven CLME countries: Colombia, Dominican Republic, Grenada, Jamaica, Panama, Saint Lucia, and Trinidad and Tobago. Its four components are designed to: (i) establish effective sargassum regional governance and integrated management in the CLME; (ii) improve decision-making and response planning to sargassum influxes by promoting the use of early warning systems; (iii) promote blue-growth initiatives and investment in sargassum biobusinesses; and (iv) support knowledge management, mobilization and scale-up.

[1] Impacts have been documented in sources such as JICA-CRFM 2019; UNEP-CEP 2021; Oxenford et al. 2019

Indicative Project Overview

Project Objective

Promoting the Integrated Management and Regional Governance of Sargassum: Building Resilient Tourism and Fisheries Sectors through the Conservation of Marine Ecosystems in Caribbean Countries (SargMarine).

Project Components

C1. Establishing effective regional governance for the integrated management of sargassum through dialogue and collaboration among countries, platforms, and relevant stakeholders in key countries of the CLME.

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	**Co-financing ($)**
1,800,000.00	12,600,000.00

Outcome:

Outcome 1.1
Regional Caribbean and Interamerican Coordination Framework and Working Group established for the integrated management of sargassum.

Outcome Indicator 1: *Creation Agreement of the Coordination Framework and Working Group signed by the participating countries and other key stakeholders.*

Outcome 1.2

Members of the Coordination Framework develop an agreed Regional Action Plan including prioritized projects for the integrated management of sargassum, as well as regional scope outputs from the other three project components, incorporating a gender and intercultural perspective.

Outcome Indicator 2: *Regional Action Plan endorsed by the Coordination Framework members.*

Outcome Indicator 3: *Prioritized regional projects approved by the Coordination Framework members, start implementation*

Output:

Output 1.1.1
Stakeholder Analysis and Engagement Strategy for Multilevel Regional Governance of Sargassum in the CLME.

Output 1.1.2
Assessment of regional regulatory and policy gaps and barriers to the effective management of sargassum in the CLME and ways to overcome them.

Output 1.1.3
Events and meetings for dialogue, experience and lessons sharing held, including all IW-GEF related projects and contributions to the Regional Ocean Coordination Mechanism, leading to the creation of the Coordination Framework.

Output 1.2.1
Stakeholder regional workshops conducted, incorporating project findings as well as those from IW-GEF related projects contributing to the Regional Ocean Coordination Mechanism within a collaborative framework to provide inputs to the Action Plan and project portfolio.

Output 1.2.2
Action Plan, incorporating a gender and intercultural perspective, is prepared by the Regional Working Group.

Output 1.2.3
Portfolio of regional projects for integrated sargassum management, incorporating a gender and intercultural perspective, is prepared by the Regional Working Group

C2. Improving decision-making and response planning to sargassum influxes and promoting the use of forecasting tools and early warning systems for economic activities and Marine Protected Areas management

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
2,600,000.00	18,200,000.00

Outcome:

Outcome 2.1: Countries with improved level of planning for response to sargassum influxes across impacted regions through exposure and vulnerability assessments and regular monitoring and evaluation

Outcome Indicator 4:
Number of national response/ integrated management plans for sargassum influxes with a regional approach under implementation

Outcome Indicator 5:
M&E systems fully operational and used to support decisions in selected case studies´ response/ integrated management plans

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Outcome 2.2: Improved precision, lead time, geographic coverage and regional scope of sargassum forecasting models and early warning systems using innovative, cost-effective technologies

Outcome* Indicator *6:
Number of countries employing the data sharing mechanism to strengthen forecasting models.

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Outcome* Indicator *7:

Number of technical institutions per country, endorsing and periodically using improved sargassum influx forecasting tools and early warning systems.

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Outcome 2.3:
Greater end-user customization and uptake of innovative sargassum forecasting tools and early warning systems by key stakeholder groups leads to improved integrated management, especially in tourism, fisheries and Marine Protected Areas.

Outcome Indicator 8*: Number of key stakeholders from tourism, fisheries and Marine Protected Areas per country that use early warning systems and forecasting tools for their sargassum management decisions*

Outcome Indicator 9*: Satisfaction levels of key stakeholders per country with respect to early warning systems and forecasting tools*

Output:

Output 2.1.1: Transferrable and adaptable guidance for sargassum influx exposure and vulnerability assessment, response/management planning, and monitoring and evaluation of influx occurrence and responses developed

Output 2.1.2: Country-driven sargassum influx exposure and vulnerability assessments incorporating a regional approach are carried out with the Regional Working Group.

Output 2.1.3:
Country-driven response and integrated management plans, informed by exposure and vulnerability assessments with a regional approach, are developed with engagement from coastal communities, incorporating a gender perspective

Output 2.1.4. Capacity building targeted support provided for two years of monitoring and evaluation of selected case study response/management plans.

Output 2.2.1
Regional data sharing mechanism to support validation of sargassum forecasting models developed and adopted, drawing on monitoring programmes.

Output 2.2.2: National sargassum early warning systems, including their institutional arrangements, developed and implemented to inform response planning and decision-making with a regional scope, in coordination with the Working Group.

Output 2.3.1: Assessment of the current coverage, uptake and end-user needs of sargassum forecasting and early warning initiatives undertaken in impacted regions

Output 2.3.2: Guidance for sargassum forecasting initiatives and early warning systems on end-user needs and increasing uptake formulated and adopted

Output 2.3.3
Capacity building for key stakeholders to use adopted and innovative sargassum forecasting tools and early warning systems delivered

Output 2.3.4 Communications and education strategy for sargassum forecasting initiatives and early warning systems developed and implemented, linked to existing knowledge platforms/ communications networks

3. Promoting blue-growth initiatives and development of the blue economy through investment in sargassum valorization enterprises

Component Type	Trust Fund
Investment	GET
GEF Project Financing ($)	Co-financing ($)
4,124,000.00	35,168,000.00

Outcome:

Outcome 3.1: Enabling regulatory environment ensured and feasible prioritized sargassum-based biobusiness initiatives promoted.

Outcome indicator 10:
Number of countries with regulations in place to catalyze sargassum biobusinesses, in line with their national blue economy strategies.

Outcome indicator 11:
Number of feasible sargassum biobusiness initiatives supported in their management capacities and upscaling of their business models

Outcome 3.2:
Regional and national blue economy development underpinned through the creation and operation of a Sargassum Biobusiness Investment Fund (SBIF).

Outcome indicator 12:
Number of direct beneficiaries disaggregated by gender as a co-benefit of blue economy development from biobusinesses and entrepreneurship programme initiatives funded by the SBIF.

Outcome indicator 13:
Level of achievement of the SBIF´s funds allocation and fundraising targets

Output:

Output 3.1.1: Feasibility analyses of sargassum biobusinesses as a means of alleviating influx impacts carried out in participating countries (including value-chain analysis, environmental and social impacts assessments, and case studies)

Output 3.1.2:
Risk assessments of sargassum biobusinesses conducted, providing recommendations for national regulatory development in participating countries as well as the Regional Action Plan.

Output 3.1.3: National blue economy strategies incorporate the recommendations from the feasibility and risk assessments

Output 3.2.1:
Sargassum biobusiness investment fund (SBIF) developed and piloted

Output 3.2.2:
Feasible biobusinesses funded by the SBIF during its pilot phase

Output 3.2.3:
Sargassum entrepreneurship programme for youth, women and marginalized groups designed, launched and implemented as a special financial window of the SBIF.

Output 3.2.4:
Initiatives funded by the special financial window of the SBIF during its pilot phase.

C4. Supporting knowledge management, mobilization and scale-up

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
700,000.00	4,900,000.00

Outcome:

Outcome 4.1: Knowledge management systems, co-learning initiatives, and the dissemination of resources and key insights for the integrated management of sargassum influxes are in place.

Outcome indicator 14:
Number of direct beneficiaries disaggregated by gender as a co-benefit of GEF investment reached by the project´s communication and education plan and dissemination of reports, published materials and other KM products.

Outcome 4.2: Effective gender-sensitive and gender-responsive project implementation based on adaptive management.

Outcome Indicator 15:
Percentage of recommendations from operational M&E system fed back into project implementation with specific attention of gender-sensitive indicators and measures.

Outcome Indicator 16:
a) % of the M&E targets met
b) Score on quality ratings of PIR, MTR and TE

Output:

Output 4.1.1:
Project communication and education plan developed and implemented (including elements from outcome 2.3)

Output 4.1.2
Reports of Pause and Reflect sessions that compile key lessons learnt and good practices published.

Output 4.1.3:
Dissemination of project outputs, results notes and other communication materials in the IWLearn.net website, sargassum hub, and other inclusive listserve and WhatsApp news.

Output 4.1.4:

Good practices and tools for sargassum regional integrated management in the CLME Countries systematized and disseminated through IW:LEARN technical publications and platform. Participation in IW- Biennial Conferences and promotion of CLME regional workshops and twinnings with IW:LEARN.

Output 4.2.1:
A gender-responsive project Monitoring and Evaluation (M&E) system using data disaggregated by sex, age and ethnicity designed and operational, as well as mainstreaming gender-sensitive approaches in all project activities, in line with CAF and GEF requirements

Output 4.2.2:
Mid-term Review and Terminal Evaluation carried out.

M&E

Component Type	Trust Fund
	GET
GEF Project Financing ($)	Co-financing ($)
300,000.00	2,100,000.00
Outcome:	
Output:	

Component Balances

Project Components	GEF Project Financing ($)	Co-financing ($)
C1. Establishing effective regional governance for the integrated management of sargassum through dialogue and collaboration among countries, platforms, and relevant stakeholders in key countries of the CLME.	1,800,000.00	12,600,000.00
C2. Improving decision-making and response planning to sargassum influxes and promoting the use of forecasting tools and early warning systems for economic activities and Marine Protected Areas management	2,600,000.00	18,200,000.00
3. Promoting blue-growth initiatives and development of the blue economy through investment in sargassum valorization enterprises	4,124,000.00	35,168,000.00
C4. Supporting knowledge management, mobilization and scale-up	700,000.00	4,900,000.00
M&E	300,000.00	2,100,000.00
Subtotal	**9,524,000.00**	**72,968,000.00**

Project Management Cost	476,000.00	3,332,000.00
Total Project Cost ($)	**10,000,000.00**	**76,300,000.00**

Please provide justification

The project´s objective is to establish a multi-level regional governance framework for the integrated management of sargassum to reduce its impacts on marine ecosystems, communities' livelihoods and local industries (tourism and fisheries) from CLME countries. Building on sargassum as an opportunity for the CLME's countries, the project aims to: (i) promote a regional governance coordination framework and working group on sargassum through dialogue and collaboration among countries, platforms, and relevant stakeholders in key countries of the CLME.(ii) improve decision making and response planning to sargassum influxes, and promote the use of forecasting tools and early warning systems for economic activities (tourism and fisheries) and Marine Protected Areas; (ii) strengthen the enabling environment for decision-making, action and social protection through the promotion of sargassum biobusiness; (iii) promote blue-growth initiatives and development of the blue economy through investment in sargassum biobusiness enterprises as a means to promote the active removal of sargassum of the CLME; and (iv) support knowledge management with lessons offering the potential to mobilize and scale-up to other countries and regions. Effective conservation of marine ecosystems in the CLME requires to recognize the sargassum influx as an opportunity rather than just a hazard. It is well known that decomposing sargassum in the nearshore, commonly referred to as the 'brown tides' have resulted in damage to nearshore ecosystems such as mangroves, seagrass beds and coral reefs which are important habitats that support activities in tourism and fisheries sectors. However, there has been considerable debate about the root cause(s) of these anomalous sargassum influx events and it has been widely agreed that the sargassum influx is a new normal given the interplay of both natural and anthropogenic factors including the influence of climate variability and change (Wang, 2019). Under that scenario, setting up mitigation measures for the influx may not be feasible; and policies, incentives, research and development and new sargassum-based business are needed to promote the active and sustainable removal of sargassum from the CLME and enhance the resilience of the local communities and economies. That said and given the urgency of the environmental issues in the CLME coast; it is imperative to propose adaptation measures to seek opportunities in the challenge, meanwhile strengthening our understanding of the root causes of this phenomenon to define clear mitigation measures in the future. The project focuses on regional coordination as well as activities at national level to support a multilevel approach that acknowledges the transboundary nature of the sargassum phenomenom. Following the Cartagena convention and its protocol on Specially Protected Areas and Wildlife (SPAW), the project will promote further collaboration among selected countries for the monitoring and forecasting of sargassum influx. Forecasting sargassum presence and influx in the CLME coasts requires political and technical collaboration to build robust models. To ensure regional coordination and dialogue, the project will promote the use of the recent Nassau Declaration and the Inter-American Plan on Climate Change 2023-2030 as key instruments, given their relevance to the relationship between climate change and the proliferation of Sargassum, as well as their role in fostering regional cooperation among the Member States of the OAS from the CLME. At the country level, the development of an effective science-policy interface with a regional scope is key in promoting response planning and exploring sustainable biobusiness initiatives. The development of regulations, response plans, early warning systems and an investment fund are needed to promote integrated management and sargassum-based business that contribute to sustainably harvesting sargassum from key areas. Lastly, the sargassum influx may jeopardize the expected impacts of the PROCARIBE+ project and future projects that aim at the sustainable management and conservation of the CLME+. The project will therefore build synergies with the

PROCARIBE+ to contribute to the reduction of the impacts of sargassum of marine ecosystems and the effective management of fisheries and other tourism industries in the CLME.

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

I. Current situation and problem

The Caribbean Sea Large Marine Ecosystem (CLME) is bordered by 23 Sovereign States and 18 Overseas Territories (Figure 1) covering an area of 3.3 million km^2. The CLME supports a broad array of commercial and subsistence fisheries and constitutes a sub-area of a distinct and globally important biogeographical area of coral reef, seagrass and mangrove development with high levels of endemism[1][2]. Fisheries and tourism are two important drivers of the region's economies and are heavily dependent on the CLME's ecosystems and their associated living marine resources. The CLME region is one of the most geopolitically and culturally diverse and complex large marine ecosystem (LME) in the world and includes the world's largest grouping of Small Islands Developing States (SIDS), consisting of 23 independent countries and overseas territories. As a result, there is an extremely wide range in their capacities for living marine resource management.

[1] CLME+ SAP, https://www.fao.org/fi/static-media/MeetingDocuments/WECAFC16/Ref12e.pdf, retrieved on August 16, 2023

Figure 1: Map showing Caribbean Large Marine Ecosystem (CLME) region and adjacent large marine ecosystems (LMEs)

The marine and coastal systems of the CLME region support exceptionally high levels of unique marine biodiversity and globally important ecological processes. For instance, approximately 10% of the world's coral reefs, and around 20% of the remaining mangrove forests are located within the CLME region. Similarly, it is estimated that at least 25 to 50% of the world's seagrass beds are located within the CLME region[1]. Mangrove forests, seagrass beds and salt marshes provide nursery grounds for regionally and globally important fish stocks and globally contribute almost 50% of the total organic carbon buried in ocean sediments, known as 'blue carbon'. As such, these habitats help in mitigating the rise in atmospheric greenhouse gases (GHG) and provide nursery grounds for regionally and globally important fish stocks.

The CLME region supports an important fishery industry (both industrial and small-scale fisheries, as well as recreational), which along with tourism forms the main source of livelihoods for the populations of coastal areas. Fisheries are a significant provider of food, livelihoods and income in the area. It is estimated that more than 900,000 people are employed directly in capture fisheries, with another 3 million jobs in ancillary activities such as processing, net-making and boat building[2][3],[3][4], and, as a whole, the region supported total fishery catches of 890,500 tonnes of fish in 2014 worth approximately US$ 2 billion annually[4][5]. Relative to its size, the island population of the CLME region is more dependent on income from tourism than that of any other part of the world: in 2019 before the COVID-19 pandemic hit the sector the Caribbean Travel & Tourism sector, 2.75 million people were employed in the sector, accounting for 15.2% of all employment, with the sector contributing US$ 61.5 billion to the Gross Domestic Product (GDP)[5][6]. Thirty-two million tourists choose to holiday in the Caribbean each year, largely attracted by the region's climate and richness in natural features, in particular those related to its marine environment. Dependence on tourism therefore also implies dependence on the capacity of the marine ecosystems to continue providing the services, goods and conditions which make the region such a popular vacation destination.

Increasing levels of eutrophication and increasing sea surface temperature (SST) together also enhance the blooming of pelagic (floating) algae, resulting in more frequent "green tides" and toxic algal blooms. For over a decade the coastal and marine environments of the CLME region have been grappling with the escalating challenge of massive, episodic inundations of pelagic (floating) sargassum seaweed. Such events are becoming more common and since 2011 the wider Caribbean region has been experiencing unprecedented influxes of pelagic sargassum. These extraordinary sargassum blooms, entering the Caribbean Sea through the Lesser Antilles as large floating mats of algae, have resulted in mass coastal strandings throughout the region and significant damage to critical coastal habitats such as mass mortality of important seagrass beds and associated corals through shading, anoxia, and excessive nutrient loading. Changes in biological productivity of any of the coastal habitats will have impacts on their ecosystem services and the trophic linkages among them and will affect both the nearshore and the oceanic food chain such that impacts will not be limited to these coastal areas[6][7].This phenomenon, once regarded as an occasional event, has evolved into a persistent and intensifying issue, with record-breaking volumes observed every 3 to 4 years. In June 2022, 24.2 million metric tons of pelagic sargassum was estimated within the Great Atlantic Sargassum Belt, stretching from West Africa to the CLME into the Gulf of Mexico LME. Now considered the 'new normal',

these mass strandings continue to have far-reaching ecological, socio-economic, institutional, and policy implications for many countries in CLME including Colombia, Dominican Republic, Grenada, Panama, Saint Lucia and Trinidad and Tobago. Furthermore, in 2015 Trinidad and Tobago declared a state of emergency due to the unprecedented scale of sargassum influxes.

The proliferation of Sargassum has disrupted the delicate balance of marine and coastal ecosystems in the CLME region. Accumulations of sargassum prevent vital sunlight from reaching important shallow-water ecosystems (mangroves, seagrass beds, coral reefs) reducing photosynthesis processes and causing rapid degradation and even coastal dead zones. Oxygen depletion also occurs beneath large mats, resulting in 'dead zones' detrimental to marine life. In Colombia, there have been instances where sargassum accumulations reached levels as high as 40 cm on prime turtle nesting beaches. These accumulations have been reported to hinder the movements of hatchlings to the sea, leaving them vulnerable to predation. In 2018, the massive arrivals were described as an ecological disaster in the Dominican Republic. Concerns have been escalating for long-term ecological health. Entanglement of foraging turtles in the sargassum rafts and blockage of turtle nesting sites by the seaweed that covers the beach also represents a threat to turtle populations in Trinidad and Tobago being one of the largest leatherback turtle nesting sites in region. In 2017 alone, it cost the Government of Trinidad and Tobago USD$433,000 to clean and clear the seaweed from the shoreline[7][8].

Regional Caribbean economies are closely interwoven with coastal sectors, notably fisheries and tourism. Sargassum seaweed has been described as “the greatest single threat to the Caribbean’s tourism industry”[8][9]; this is significant given the importance of this sector as the main foreign exchange source for the region, providing approximately 33% of Gross Domestic Product (up to 77 % in some countries). Tourism in the Caribbean has been taking a detrimental hit as visitor numbers decline due to unattractive beaches and disrupted water and shoreline-based activities. In 2014, an unusual tide of sargassum reached the northeastern coast of the San Andres Island, covering an estimated of 32520 m^2 disrupting tourism and other economic activities.[9][10] Hoteliers in the Dominican Republic and Trinidad and Tobago have all reported that sargassum has been diminishing the tourism product. The total estimated expenditure for clean-up, removal, and disposal for these countries in 2018 ranged between $445,000 to $7 million USD per country. The COVID-19 pandemic has placed further strain on tourism industries, having a cumulative effect of diminished revenue, increased unemployment, and compromised coastal community resilience.

The recurring influxes of sargassum seaweed in the CLME region have increased uncertainty over the region's fishing industries, as numerous accounts highlight damage to fishing gear, boat engines and other fishing assets. Additionally, clogged mooring sites, reduced catches, disrupted fishing activities, have been adversely affecting livelihoods. Despite demonstrations of adaptability and resilience by the fisheries sector, the impacts cannot be ignored, especially given the role of fisheries in food security, livelihoods, and foreign exchange revenues.

Institutions in the CLME region have also been struggling to cope with the unprecedented scale and frequency of sargassum influxes. Although strides have been made in sargassum forecasting, the dynamic nature of sargassum presents challenges which make planning and preparation difficult. Lack of coordination among various agencies and comprehensive and adaptive policies have led to ad hoc responses, resulting in environmental degradation, inefficient use of resources and poor governance. The lack of coordination among various agencies and the absence of comprehensive, adaptive policies have resulted in ad hoc responses, leading to environmental degradation, inefficient resource use, and poor governance. This situation persists despite the existence of multiple platforms, regional sargassum projects, and policy instruments that promote dialogue and cooperation between countries. Although numerous projects and initiatives exist at national, multi-country, and sub-regional levels—often very similar in nature—efforts to explore synergies and avoid unnecessary duplication have not produced successful outcomes. What is needed are adaptive, collaborative, and well-informed responses under an Inter-American and Caribbean governance framework that address the needs of those most impacted, advancing sargassum influx management and governance in the CLME.

ii. Underlying root causes of environmental change in the project context

The damage to marine and coastal ecosystems by sargassum influxes in the CLME is caused by complex biophysical factors. In 2011, massive strandings of sargassum seaweed occurred on the coasts of the Lesser Antilles of the CLME, northern Brazil and West Africa. Back traces from sargassum sighting locations using a high-resolution satellite imagery revealed a new source region, the North Equatorial Recirculation Region (NERR), an area in the southern tropical Atlantic near the Equator. This new area of drifting algal masses was named the Great Atlantic Sargassum Belt and has been recurring annually since 2011 and extended up to 8850 km from the west coast of Africa to the Gulf of Mexico, peaking in 2018, with a biomass of >20 million tons. There has been considerable debate about the root cause(s) of these anomalous sargassum influx events and this is still an active area of research. The leading hypothesis for the influxes points to a wind and surface current anomaly in 2009-2010, which resulted in sargassum being transported from the Sargasso Sea to the tropics, where conditions are favorable for its proliferation. Persistence and proliferation of sargassum in the new source region are driven by a number of interrelated factors that may be linked to the broader underlying issues of ocean eutrophication in the Atlantic Basin via river discharges (due to deforestation and other land-use changes upstream) and climate change. The causal pathway for sargassum proliferation is shown in Figure 2 below.

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[1] UNEP-WCMC, W.C., WRI, TNC, 2021. Global distribution of warm-water coral reefs, compiled from multiple sources including the Millennium Coral Reef Mapping Project. Version 4.1. Includes contributions from IMaRS-USF and IRD (2005), IMaRS-USF (2005) and Spalding et al. (2001). Cambridge (UK): UN Environment World Conservation Monitoring Centre. Data DOI: https://doi.org/10.34892/t2wk-5t34

[2] Debels, P., Fanning, L., Mahon, R., McConney, P., Walker, L., Bahri, T., Haughton, M., McDonald, K., Perez, M., Singh-Renton, S., Toro, C., Van Anrooy, R., Khouri, A.V., Whalley, P., 2017. The CLME+ Strategic Action Programme: An ecosystems approach for assessing and managing the Caribbean Sea and North Brazil Shelf Large Marine Ecosystems. Environmental Development 22, 191-205

[3] Villasante, S., Österblom, H., 2015. The role of cooperation for improved stewardship of marine social-ecological systems in Latin America. Ecol. Soc. 20(1), 8.

[4] Oxenford, H.A., Monnereau, I., 2018. Chapter 9: Climate change impacts, vulnerabilities and adaptations: Western Central Atlantic marine fisheries. In: M. Barange, T. Bahri, M.C.M. Beveridge, K.L. Cochrane, S. Funge-Smith, F. Poulain (Eds.), Impacts of climate change on fisheries and aquaculture: synthesis of current knowledge, adaptation and mitigation options, FAO, Rome, FAO Fisheries and Aquaculture Technical Paper No. 627, 147-168 pp.

[5] WTTC, https://wttc.org/Portals/0/Documents/Reports/2022/Travel-and-tourism-in-the-caribbean.pdf, retrieved August 16, 2023.

[6] Oxenford, H. and I. Monnereau. 2018. Chapter 9: Climate change impacts, vulnerabilities and adaptations: Western Central Atlantic marine fisheries.

[7] GoRTT, https://www.planning.gov.tt/content/tobago-gets-seaweed-help-japan-un#:~:text=She%20said%20the%20phenomenon%20had,fouling%20and%20coastal%20dead%20zones, retrieved August 16, 2023.

[8] Caribbean Development Portal, https://caribbean.eclac.org/node/1338, retrieved August 16, 2023

[9] Gavio B, Rincón-Díaz M.N, Santos-Martínez A. Massive quantities of pelagic Sargassum on the shores of San Andrés Island, southwestern Caribbean. 2015. *Acta biol. Colomb.* 20(1):239-241. https://doi.org/10.15446/abc.v20n1.46109.

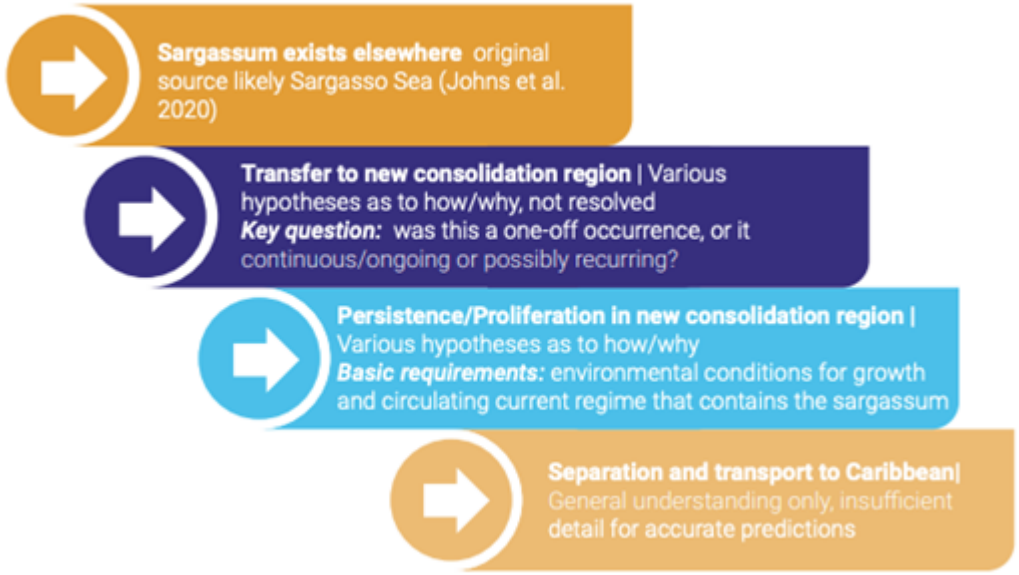

Figure 2: Sargassum Causal Pathway. Source: UNEP-CEP 2021 Sargassum White Paper

Nutrient availability within the Tropical Atlantic plays a vital role in determining the growth and abundance of sargassum. There are multiple pathways of nutrient enrichment including discharges from the Congo, Amazon, and Mississippi rivers, upwelling off the coast of Africa, vertical mixing, equatorial upwelling, atmospheric deposition from Saharan dust and biomass burning of vegetation in central and south Africa. These sources provide varying quantities of Nitrogen (N) and Phosphorus (P) and micronutrients that stimulate the growth of sargassum. Land use changes such as deforestation, urbanization, and agricultural expansion can increase nutrient runoff and could contribute to the increasingly large plumes entering the oceans from the mouths of rivers. While studies assessing the relationship between seasonal river discharges and sargassum abundance suggest that river inputs may have contributed to bloom formation in 2011, 2014 and 2015; during the record-breaking year of 2018 there was no Amazon flood influence (Lapointe et al., 2021; Oviatt et al., 2019). This suggests that river discharges are not the primary driving forces behind bloom events. Rather than river outflows, recent studies suggest that yearly changes in the intensity of blooms are primarily driven by anomaly patterns of regional winds and currents that control nutrient abundance and sargassum distribution.

Sargassum influxes are particularly difficult to manage because the factors driving this over-proliferation are multiple and respond to climate variability, marine wind patterns, currents, cloud cover and atmospheric pressure, all of which are dynamic and none of which are limited by national boundaries. The sargassum phenomena can be considered a ‘wicked problem’, influenced by a complex interplay of both natural and

anthropogenic factors. After more than ten years there are still many unanswered questions and research gaps that need to be addressed to inform decision-making and support policy development.

iii. Baseline and barriers baseline

Current levels and effectiveness of integrated management of sargassum influxes (the baseline) varies from country to country, but the CLME countries face four main challenges (barriers) that hinder more effective integrated management of sargassum.

1: The governance of Sargassum and regional dialogue among CLME countries are weak due to insufficient coordination between platforms, regional projects, and existing normative and institutional frameworks. There are essential instruments for the integrated and coordinated management of Sargassum, including the Cartagena Convention, the SPAW Protocol, the Regional Strategy and Action Plan for the Valuation, Protection, and/or Restoration of Key Marine Habitats in the Wider Caribbean (2021-2030), the CLME+ SAP, and the Sargassum White Paper. Additionally, there are platforms and sustainable development projects focused on Sargassum. However, coordination is insufficient, and there is no process in place to promote regional dialogue within the Inter-American system that fosters effective cooperation in Latin America and the Caribbean while contributing to the 2030 Agenda from a regional perspective. This scenario requires cooperation aimed at reducing duplication, enhancing outcomes, addressing regional regulatory and policy gaps and barriers to effective management of sargassum, institutionalizing technical and political dialogue among countries, bilateral and multilateral institutions, NGOs, and the private sector under the Inter-American System. In this context, it is important to highlight the recent Nassau Declaration and the Inter-American Plan on Climate Change 2023-2030 as significant instruments, given their relevance to the relationship between climate change and the proliferation of Sargassum, as well as their role in promoting regional cooperation among the Member States of the OAS.

2: Evidence-based decision-making and response planning to sargassum influxes are limited by the lack of a regional approach that underpins exposure and vulnerability assessments as well as regional integrated management strategies. Existing forecasting models and early warning systems also fall short of including a regional scope and data sharing mechanisms that will enhance their robustness while fostering cooperation among affected countries. On the other hand, these instruments and systems need to be customized to the tourism and fisheries sectors as well as to better suit the management of Marine Protected Areas, and the implications of forecasts should be clearly articulated. Lead times for forecasts may need to be extended and there must be consideration for the integration of sector specific datasets to inform targeted interventions and support the documentation of impacts. It is important to note that the documentation of impacts should include a gender analysis, as the effects of Sargassum are not neutral with regard to gender issues, and there is a lack of information on this topic.

3: Weak/ineffective enabling environment exists for decision-making, action and social protection which limits support to the promotion of sargassum biobusinesses. Policy makers have frequently expressed concern about the unpredictability of the supply of raw material required to support the establishment of sargassum industries and the lack of related regulations based on comprehensive risk assessments. For these reasons, governments have not set the rules or invested at levels needed to propel biobusiness initiatives that can contribute to the alleviation of impacts. Creating an effective enabling environment is important in catalyzing innovation and inspiring action to address sargassum influxes through integrated management.

4: Lack of sargassum-related blue-growth initiatives to promote the development of the blue economy. Lack of capital and trade barriers prevent the widespread deployment of proven, affordable and appropriate technology innovations for the sustainable management and use of sargassum. Companies with these

sargassum management & sustainable use solutions often lack the operating and/or financing capacity to capitalize on such opportunities for growth and international expansion. A gap in equity finance for new as well as more established small and medium enterprises in Caribbean countries also impedes growth, particularly in emerging markets. Therefore, the creation of an ad-hoc investment fund will help provide needed capital and expertise to help companies with climate resilience solutions scale up and expand to where these solutions are needed most.

5: Poor knowledge and awareness of measures and mechanisms to support regional integrated sargassum management in the CLME. Although many communication products exist about sargassum biology, monitoring tools and forecasting products, information available on measures and mechanisms to support regional integrated sargassum management is limited and what exists is fragmented across platforms. In many cases, the guidance can be found in technical documents and journal articles which are not accessible to sectoral stakeholders and policy makers. This information needs to be centralized and packaged in formats that promote effective learning, products such as good practice guides and forums to promote knowledge sharing and lessons learned, and learning exchanges may increase the awareness of stakeholders and inspire action. In this context, it is also important to incorporate a gender and intercultural perspective to strengthen engagement with vulnerable populations and to develop capacities to address gender and equity gaps related to the impacts of Sargassum.

iv. Objective of the project and its justification

The project´s objective is to establish a multi-level regional governance framework for the integrated management of sargassum to reduce its impacts on marine ecosystems, communities' livelihoods and local industries (tourism and fisheries) from CLME countries. Building on sargassum as an opportunity for the CLME's countries, the project aims to: (i) promote a regional governance coordination framework and working group on sargassum through dialogue and collaboration among countries, platforms, and relevant stakeholders in key countries of the CLME.(ii) improve decision making and response planning to sargassum influxes, and promote the use of forecasting tools and early warning systems for economic activities (tourism and fisheries) and Marine Protected Areas; (ii) strengthen the enabling environment for decision-making, action and social protection through the promotion of sargassum biobusiness; (iii) promote blue-growth initiatives and development of the blue economy through investment in sargassum biobusiness enterprises as a means to promote the active removal of sargassum of the CLME; and (iv) support knowledge management with lessons offering the potential to mobilize and scale-up to other countries and regions.
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Effective conservation of marine ecosystems in the CLME requires recognizing the sargassum influx as an opportunity rather than just a hazard. It is well known that decomposing sargassum in the nearshore, commonly referred to as the 'brown tides', have resulted in damage to nearshore ecosystems such as mangroves, seagrass beds and coral reefs which are important habitats that support activities in tourism and fisheries sectors. However, there has been considerable debate about the root cause(s) of these anomalous sargassum influx events and it has been widely agreed that the sargassum influx is a new normal given the interplay of both natural and anthropogenic factors including the influence of climate variability and change (Wang, 2019). Under that scenario, setting up mitigation measures for the influx may not be feasible. Policies, incentives, research and development and new sargassum-based business are needed to promote the active and sustainable removal of sargassum from the CLME and enhance the resilience of the local communities and economies. That said and given the urgency of the environmental issues in the CLME coast; it is imperative to propose adaptation measures to seek opportunities in the challenge, meanwhile strengthening our understanding of the root causes of this phenomenon to define clear mitigation measures in the future.

The project focuses on regional coordination as well as activities at national level to support a multilevel approach that acknowledges the transboundary nature of the sargassum phenomenom. Following the Cartagena convention and its protocol on Specially Protected Areas and Wildlife (SPAW), the project will promote further collaboration among selected countries for the monitoring and forecasting of sargassum influx. Forecasting sargassum presence and influx in the CLME coasts requires political and technical collaboration to build robust models. To ensure regional coordination and dialogue, the project will promote the use of the recent Nassau Declaration and the Inter-American Plan on Climate Change 2023-2030 as key instruments, given their relevance to the relationship between climate change and the proliferation of Sargassum, as well as their role in fostering regional cooperation among the Member States of the OAS from the CLME.

At the country level, the development of an effective science-policy interface with a regional scope is key in promoting response planning and exploring sustainable biobusiness initiatives. The development of regulations, response plans, early warning systems and an investment fund are needed to promote integrated management and sargassum-based business that contribute to sustainably harvesting sargassum from key areas.

Lastly, the sargassum influx may jeopardize the expected impacts of the PROCARIBE+ project and future projects that aim at the sustainable management and conservation of the CLME+. The project will therefore build synergies with the PROCARIBE+ to contribute to the reduction of the impacts of sargassum of marine ecosystems and the effective management of fisheries and other tourism industries in the CLME.

v. Likely future without intervention

While the extent and magnitude of sargassum influxes may vary in different countries, the prevailing indications suggest that the sargassum phenomenon is well poised to persist into the future. As climate change continues to reshape ocean currents and sea temperatures, and anthropogenic activities continue to provide the nourishment and conditions that sustain the phenomenon, scientists have generally agreed that there is no end in sight for sargassum influxes.

Without the interventions proposed by this GEF project, decision-making and response to sargassum influxes impacting the tourism and fisheries sectors would likely continue to be reactive. Sargassum influxes peak during the summer months which coincides with summer festivals that attract many visitors, moderate to severe influxes are also occurring in the first quarter of the year during the peak winter tourist season. Without appropriate and effective coping and adaptive strategies tourism stakeholders remain vulnerable to the unpredictable timing and intensity of the seaweed's arrival, leading to significant revenue losses during peak tourist months.

Reactive responses like beach clean-ups, while necessary, do not address the negative perceptions associated with sargassum-covered beaches. The absence of adaptive strategies to manage these perceptions can result in long-term damage to destination images and reputations. This is already happening, resulting in booking cancellations in some destinations. The heavy dependence of the Caribbean on the tourism industry means that the region’s economies are at risk, without intervention. The enabling environment for decision making, action and social protection as it relates to sargassum influxes and impacts will likely continue to be weak/ineffective without this project’s intervention. Relevant authorities and communities have been focusing on cleaning up beaches and disposing of accumulated seaweed and less on coping and adaptive strategies to ensure their sustainability and resilience. There is still a lack of livelihood analysis, socio-

economic impacts analyses, investigations into coping and adaptation strategies, institutions, and implementation of policy interventions which are all needed to effect change.

Sargassum biobusiness is a viable option which will be explored under this project. However, evidence shows that a “silver bullet” for the region is not suitable, as approaches and technologies that work well in one location may or may not be transferable to another. There are many examples where resources have been inappropriately allocated, especially as it relates to clean-up equipment/methods and institutional arrangements. Furthermore, while biobusiness holds promise, it is crucial to emphasize that successful implementation demands a site-specific analysis that considers local conditions, resources, and stakeholders. There are still relatively few examples of sustainable sargassum businesses and upscaling of sargassum products and services. Without proper feasibility and risk assessment studies sargassum businesses will continue to face challenges that hinder their growth and success.

There is also an opportunity to promote blue-growth initiatives and development of the blue economy through investment in sargassum biobusiness enterprises in this project. The development process of funds such as the Blue Biobusiness Fund can provide an example of how blue growth initiatives can be structured and sustained. Although fisherfolk have demonstrated their willingness to adapt, efforts are hindered by the lack of financial and technical support required for successful sustainable adaptation. Impacted fisherfolk continue to grapple with reduced catch and income instability. The absence of adaptive strategies limits the fisheries sector's ability to embrace sustainable practices in the midst of sargassum challenges. The pressures on fisherfolk to maintain livelihoods and meet market demands may lead to overfishing and unsustainable harvesting practices, which in turn exacerbate the sector's vulnerability. Already fishers are catching juvenile dolphinfish to compensate for reduced harvests of target species such as flying fish. Balancing economic needs with ecosystem health is essential to ensure the long-term sustainability of both fisherfolk livelihoods and marine ecosystems.

Numerous government agencies, non-governmental organizations, research institutions, and local communities are independently engaging in efforts to tackle sargassum influxes. These fragmented responses result in inefficient resource allocation, duplication of initiatives, and missed opportunities for synergies and effective and innovative solutions. There needs to be greater collaboration among stakeholders to streamline efforts and harmonize approaches that not only benefit sargassum management but overall, the blue economy. Furthermore, in the absence of increased knowledge and greater understanding and application of best practice for integrated management sargassum, countries in the CLME region will only attempt to address sargassum challenges after serious negative impacts occur to economies of their fisheries and tourism sectors.

The SargMarine Project represents a holistic integrated approach to address these challenges, to generate enabling conditions and catalyze actions to improve sustainable sargassum management in Colombia, Dominican Republic, Grenada, Jamaica, Panama, Saint Lucia and Trinidad and Tobago. By integrating science, innovation, community engagement, and policy advocacy, the project aims to develop sustainable solutions that benefit both marine ecosystems and the communities that rely on them.

vi. Selection of project in preference to other potential options

The proposed project has been designed to strategically address gaps that have been identified by national authorities, sargassum scientific community and key stakeholders in the tourism and fisheries sectors. Targeted proactive interventions outlined have been recommended based on failures and lessons learned from reactive approaches implemented in the past. There are potential synergies with existing sargassum

related projects but none of them employ a systems thinking approach[1] which is required to address complex 'wicked problems' such as sargassum influxes.

vii. Endurance of project outcomes

The potential for enduring outcomes will be achieved through the establishment of a Regional Caribbean and Interamerican Coordination Framework and Working Group for the integrated management of sargassum and their effective cooperation through a Regional Action Plan and mechanisms for data sharing and collaboration on research, forecasting models and early warning systems. The regional approach will also underpin national sargassum response/ integrated management plans. Regional and national blue economy development will be triggered through the provision of an enabling environment and creation and operation of a Sargassum Biobusiness Investment Fund (SBIF). Finally, the project will emphasize capacity building, communication and education strategies to ensure a wide outreach and appropriation among key stakeholders from participating governments, bilateral and multilateral institutions, private sector, communities and organizations.

viii. Stakeholders and their roles

The key stakeholders in this project include the marine protected areas authorities, national fisheries authorities and tourism agencies in the project countries that have responsibility for fisheries and tourism management, and some of which are parties to wider regional and international fisheries, tourism and relevant agreements (e.g., CARICOM Common Fisheries Policy) and parties to binding agreements (UNCLOS, PSMA, Compliance Agreement). In addition, these agencies, along with national institutes conducting fisheries and tourism research, often offer employment opportunities for women and youth in the fisheries and tourism sector. Equally critical stakeholders are the artisanal fishers, fisherfolk along the value chain, hoteliers and tourism operators (along with their associated fishing and tourism communities) that make up the bulk of the fisheries and tourism areas in the project countries and would be most directly affected by any new national or regional level sargassum response/management measures closed areas/seasons.

The project will develop strong partnerships with the private sector through collaborations with businesses along the fisheries and tourism value chains with the main companies involved. The project will also involve a wider group of international strategic partners such as UN agencies including the United National Environment Programme (UNEP), UNDP accelerator lab, FAO and IOC UNESCO Global HAB Subcommittee on sargassum. Other international partners may include NOAA, European Space Agency, and GEO Blue Planet.

ix. Fit within the current landscape of investments, country profiles and lessons learned from previous projects

The proposed project acknowledges and builds upon the key contributions of previous initiatives to create a cohesive framework that integrates various dimensions of sargassum challenges in the Caribbean Large Marine Ecosystem, including scientific research, community engagement, economic opportunities, and sustainable practices. Also, it will build synergies with current projects, including the PROCARIBE+ and BE-CLME+, to foster integral solutions of the environmental issues in the CLME. The project also builds on the International Water objectives and learning and collaboration platforms (IW:LEARN), the Cartagena

Convention and its SPAW protocol, and the OAS and CAF expertise to strengthen regional governance and collaboration mechanisms and the investment in blue economy opportunities to sargassum-based business while sustainably harvesting sargassum from key habitats of the CLME.

Between 2019 and 2022, **SargAdapt Project** aimed to reduce the impacts of and improve adaptation to sargassum influxes in the Eastern Caribbean with emphasis on converting a climate-linked ecosystem hazard into an asset that supports opportunities for socio-economic development. Five countries in the Eastern Caribbean participated in the project including Dominica, Barbados, St. Lucia, St. Vincent and the Grenadines and Grenada. The SargAdapt Project was implemented by UWI-CERMES and was built upon three essential components that collectively drive its mission of enhancing coastal resilience, promoting sustainable livelihoods, and effectively addressing the challenges posed by sargassum influxes.

This proposal takes into account two major contributions from the SargAdapt project. First, it introduces a paradigm shift, viewing the issue not as a challenge but as an opportunity to promote local development, economic growth, job creation, and the restoration of key coastal habitats in the CLME region. Second, the SargAdap **Good Practice Guide Series**, which outlines effective methods for monitoring, assessing, and cleaning up sargassum in these habitats. This guide includes the use of drones, ground surveys, assessments, and best practices for cleanup initiatives. It also acknowledges the unique circumstances of each country and region, offering a tailored toolbox to address local opportunities and needs more effectively.

Following this line of work, the proposed project will build synergies with the ongoing project name "**Improving National Sargassum management Capacities in the Caribbean**". This project is executed by UNDP Blue Accelerator Lab, The University of West Indies and other partners in Barbados, St. Kitts & Nevis, Saint Lucia, St. Vincent and the Grenadines, Trinidad and Tobago (2022-2025), with the aim to support the enhancement of the national capacity for the management of sargassum seaweed by providing five countries in the Caribbean with equipment, expertise, and technical knowledge to collect, remove, transport, and dispose of accumulated/stranded sargassum to mitigate the recurring threat posed. Also, the Integrated Sargassum Management for the Wider Caribbean project is working on similar efforts, including i) Mapping and developing Sargassum monitoring and forecasting capabilities in the Wider Caribbean Region, and; ii) demonstrate and disseminate the use of innovative technologies for the collection, containment, and proper disposal of Sargassum in the Wider Caribbean region. Together with the SargAdapt project guides, the lessons learnt from both projects will be essential to inform the decision at the regional and national level (including policies and regulations) for the mapping, forecasting and removal of sargassum from key habitats and its connection to the sargassum-based business (circular blue economy).

In 2021, UNEP-CEP published its **Sargassum White Paper**. The two key contributions of the projects are i) the compilation of key scientific information about the influx, concluding that it is likely that the sargassum influx is the new normal for the CLME+ area, and ii) a high-level strategy framework to shift the sargassum influx from a challenge to an opportunity, following the proposed approach by the SargAdap Project (Figure 3). The framework suggests larger investment in initiatives that promote research-driven studies to management strategies, encompassing both local and regional scales and highlighting clear blue economy links. Some initiatives focus on early warning systems and monitoring, and others emphasize sustainable removal, transforming collected seaweed into valuable products.

[1] Systems thinking is a way of making sense of the complexity of the world by looking at it in terms of wholes and relationships rather than by splitting it down into its parts.

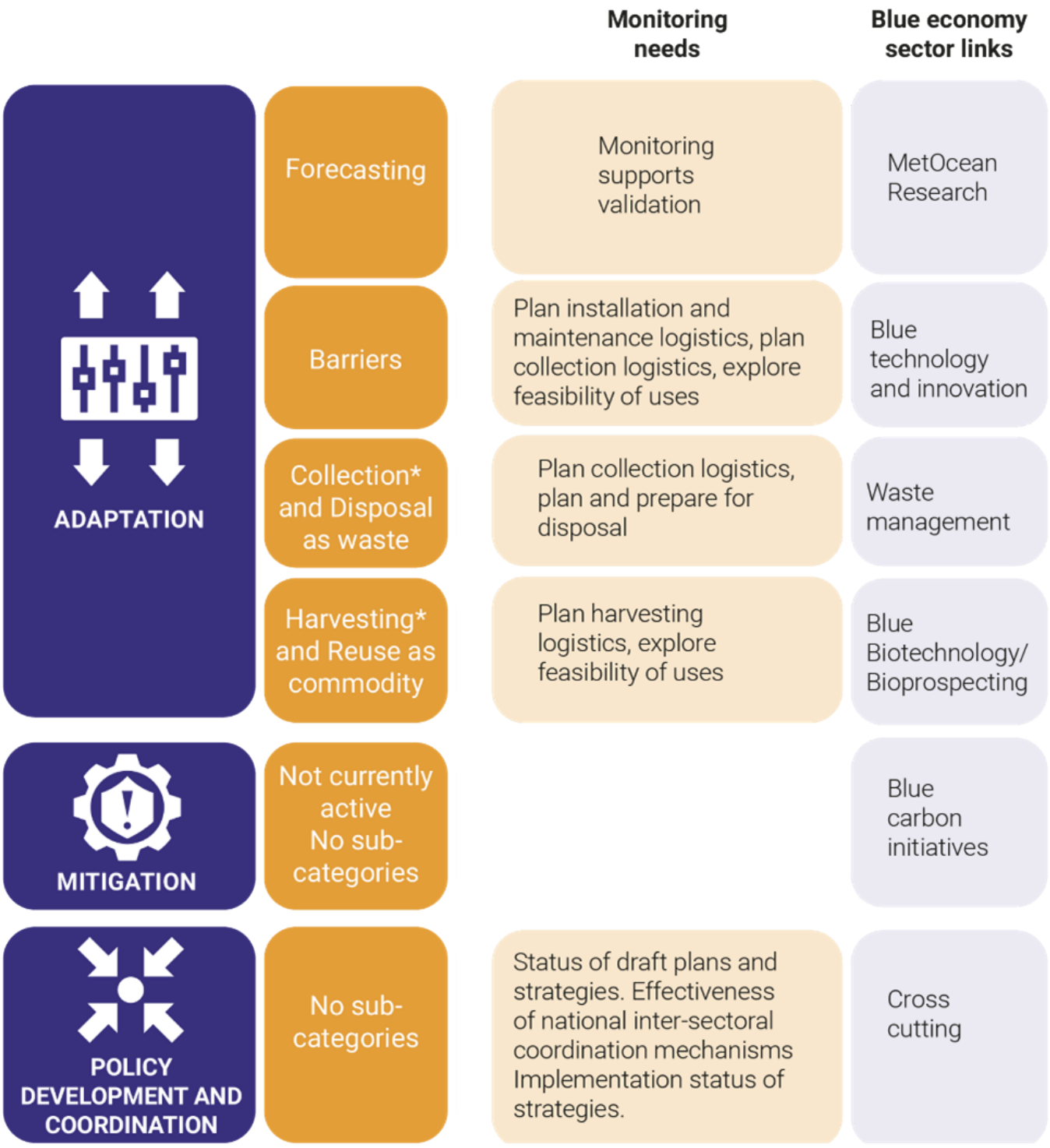


Figure 3: Strategy framework for sargassum interventions. Source: UNEP-CEP 2021 Sargassum White Paper

Regarding the science to foster better management of sargassum, there have been several scientific research projects. Among them, the SARTRAC project (**Teleconnected SARgassum risks across the Atlantic: building capacity for TRansformational Adaptation in the Caribbean and West Africa)** is one worth highlighting. It is a collaboration between theUniversity of Southampton, University of Ghana, UWI-CERMES, UWI-MONA, and the University of York. The proposed project will incorporate a key cornerstone of the SARTRAC Project, specifically its real-time monitoring network-SarTECH. This

network combines different sources of knowledge, including citizen science and IT solutions such as buoys equipped with sensors to track sargassum movements, ocean currents, and other relevant data. This real-time information empowers stakeholders to respond proactively and minimize disruptions. By collecting and analyzing data on sargassum density, distribution, and movement patterns, the SARTRAC Project provides governments, industries, and communities with accurate and timely information. This data-driven approach facilitates informed decision-making and supports effective resource allocation. Working closely with governmental bodies and policymakers, SARTRAC contributes to the formulation of effective policies and regulations pertaining to sargassum management. Together with other forecasting models and information systems (including Satellite Sargassum Monitoring System-SASAMS), the proposed project will create governance mechanisms to close the gap between science and policy and the strengthening of key decision support tools for the integral management of sargassum (including early warning systems).

Besides building upon and synergies with scientific and technical initiatives to better understand, and forecast and warning systems for sargassum, the proposed project also builds off key national as well as regional initiatives for the integral management of sargassum in the CLME+ and West Africa, with particular attention to biodiversity projects (sargassum as an invasive species) as well as projects promoting sargassum market and value chains (sargassum as a commodity or raw material). It is important to note that cross-region capacity building and learning exchange for the integrated management of sargassum will be promoted through the GEF International Waters projects in partnership with IW: LEARN.

There have been several efforts in the CLME to promote the conservation of marine biodiversity, climate change mitigation and adaptation and address the sargassum influx challenges. It is worth noting some key previous and ongoing projects in the region. From 2020 to 2023, the Caribbean Region Fisheries Management Organization partnered with Plant and Food Research to explore the creation of new technologies and value chains from sargassum biomass. The Project, implemented in Barbados, Belize, Jamaica, and the Dominican Republic has the overall aim of mitigating the environmental and economic impacts of sargassum influxes in Caribbean countries through creation of inclusive value chains for sargassum seaweed. Embracing sargassum as an opportunity, the Project is expected to identify and use appropriate sustainable technologies for efficient harvesting of sargassum, according to international best practices. To achieve its aim, the Project implements a logical sequence of activities beginning with reviewing raw material safety testing and harvesting operations, followed by developing sargassum-derived product prototypes and production processes, creating a commercialization strategy to support its marketing and lastly conducting outreach and supply chain development. By transforming sargassum from a problem into a resource, the project pioneers solutions that benefit both local economies and the environment, fostering resilience and sustainability.

Since 2020, with a GEF funding of around USD 6.2M (total budget of USD 41.6M), the **BE-CLME+** project has been promoting blue economy development in the CLME+ through marine spatial planning and marine protected areas (MPAs), ecosystem-based approach to fisheries management (EAF), and sustainable seafood value chains in Barbados, Belize, Guyana, Jamaica, Panama, and Saint Lucia. The proposed project will build synergies and build upon key outcomes of the BE-CLME+ project, giving continuity to key processes. The proposed project will reduce the sargassum-based risks to fisheries operations and EAF initiatives. Meanwhile, the BE-CLME+ will complete a value chain analysis for the sargassum which will be essential for the component 3 of the proposed project.

The **sustainable sargassum management in Anguilla, British Virgin Islands and Montserrat' (2021-2024)** is a project implemented by the Caribbean Natural Resources Institute (CANARI), is aimed at enhancing the knowledge, institutional frameworks, experience and commitment of coastal and marine resource managers and users in Anguilla, the British Virgin Islands and Montserrat to manage the ecological and socio-economic risks from sargassum influxes. A key output of the project will be the sargassum management plans using a multi-level, participatory process to address coastal and marine biodiversity and

livelihood risks at territorial and local levels in Anguilla, BVI and Montserrat, which align well with the component 2 and 3 of this proposed project.

The proposed project complements the PROCARIBE+ initiative by promoting ecosystem-based management in the CLME+ region and supporting the goals of the International Water, Cartagena Convention and its SPAW Protocol, along with other international biodiversity and climate change commitments. With a GEF funding of around USD 15.4M (Total budget around USD129.8M), the PROCARIBE+ project aims at implementing integrated ocean management arrangements (regional and national), enabling and developing sustainable and resilient ocean-based (blue) economies (through Marine Spatial Planning, marine conservation, sustainable fisheries and addressing land-based sources of pollution); while taking into account cross-cutting issues such as climate change, gender and post COVID-19 recovery, and; catalyzing the next iteration of key regional processes such as the Transboundary Diagnostic Analysis (TDA)/Strategic Action Programme (SAP). The PROCARIBE+ overlaps with the countries participating in the proposed project, allowing the connection not only at the project coordination level but also on the work on the ground and mutually benefiting from the integrated management of the sargassum influx as well as the ecosystem-based management of the CLME+.

Finally, the proposed project will build off and strengthen the current national policies, regulations and initiatives for the integrated management of sargassum, with special emphasis on capacity building and investment in data and monitoring, early warning system and blue economy. Further analysis of the current legal framework will be conducted at the PPG level as well as the implementation of the project.

In Colombia, the government has developed a comprehensive strategy to address the sargassum influx affecting its Caribbean coastline. The Ministry of Environment and Sustainable Development leads the effort, collaborating with various institutions to manage the problem through policies focused on environmental protection and coastal sustainability. These strategies involve extensive research, the establishment of monitoring systems, and engagement with local communities to reduce the adverse effects of sargassum on marine ecosystems, fisheries, and tourism.

Colombia's past initiatives have included beach cleaning campaigns and public awareness programs, alongside research into the potential of sargassum for biofuel production. Currently, projects explore innovative uses of sargassum, such as converting it into fertilizers. Regional cooperation with neighboring Caribbean countries aims to develop collective solutions. The country's evolving commitment seeks to protect coastal communities and ecosystems while exploring sustainable economic opportunities.

The **Dominican Republic**, renowned for its coastlines and tourism industry, has faced significant sargassum challenges since 2015, particularly in Punta Cana. To tackle this issue, the government, private sector, and local communities have worked together to mitigate its impact on tourism, fishing, and coastal environments. In 2019, the Dominican Republic introduced the strategy “Impacts and Challenges of the Sargasso,” followed by the 2023 “Multisectoral Roundtable for the Integral Management of Sargassum.” This plan focuses on enhancing data collection, monitoring sargassum movement, prioritizing cleanup efforts, and promoting businesses utilizing the seaweed.

Regionally, the Dominican Republic adheres to international guidelines such as the Convention on Biological Diversity (CBD) and SPAW Protocol. The National Maritime Affairs Authority (ANAMAR), with the Dominican Navy, reviews forecasts and coordinates interventions. Citizen science initiatives like the 'Centro de Monitoreo de Sargazo en Bávaro Punta Cana' offer real-time updates from locals and tourists. Innovation is also a key component, with companies like Algaenova and SOS Carbon exploring sargassum’s potential uses in compost, biogas, and cosmetics. Government funding supports research into sustainable applications, though concerns over high arsenic levels necessitate further investigation.

Panama also contends with sargassum affecting its Caribbean coastline. The Ministry of Environment, Panama Maritime Authority, and local municipalities oversee a multi-faceted response. Historical measures include beach cleanups and early warning systems to monitor sargassum movements. Current projects focus on developing efficient collection technologies and exploring sargassum's applications in bioplastics and fertilizers. Regional collaboration with neighboring countries is crucial for sharing knowledge and coordinating responses, aiming to minimize environmental and economic impacts.

Saint Lucia has struggled with annual sargassum influxes since 2011, affecting its coastal communities and industries. The government established the National Strategy for the Management of Sargassum Influxes to guide cleanup and response efforts. In 2017, the Sargassum Task Force was formed but has since been discontinued, with the National Conservation Authority (NCA) now leading cleanup efforts, especially on recreational beaches. The Sargassum Subregional Outlook Bulletin from CERMES helps forecast sargassum influxes, aiding in preparation for impacts on tourism, fisheries, and the environment.

Innovative solutions include using sargassum as organic fertilizer. Algas Organics, in partnership with the Saint Lucia Fisherfolk Cooperative Society Ltd, has established the Caribbean's first Sargassum Seaweed Processing Facility, creating jobs and alternative livelihoods for local fisherfolk.

Jamaica has been significantly affected by sargassum influxes, particularly in coastal areas like St. Mary and Portland. In response, the government and private entities, including resorts and research institutions, have undertaken cleanup activities and research initiatives. Jamaica's National Sargassum Response Strategy is structured into three tiers: daily cleanup by beach property owners, removal by parish councils for larger accumulations, and intervention by the National Solid Waste Management Authority (NSWMA) for extensive accumulations. Since 2018, the National Environment and Planning Agency (NEPA) has used satellite systems like the Sargassum Watch System (SaWS) and on-ground observations for monitoring.

NEPA's collaboration with the University of the West Indies on the SARTRAC project aims to develop the Jamaica Sargassum Early Advisory System (JSEAS), providing early detection and alerts. Research is ongoing into commercial applications of sargassum, including biofuel production and other uses by ventures like Awganic Inputs.

Trinidad and Tobago have experienced significant sargassum influxes affecting tourism and fishing industries. The Ministry of Planning and Development, along with the Ministry of Agriculture, Land and Fisheries, coordinates national responses. Previous measures include beach cleanups and public awareness campaigns. Ongoing strategies involve researching sustainable solutions, such as converting sargassum into biofuels and fertilizers, and exploring its use in environmental restoration. Regional cooperation plays a vital role in sharing resources and knowledge, striving for a coordinated approach to managing sargassum and protecting coastal environments.

B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

i. Project approach and Theory of Change

The overall project objective is to establish a multi-level regional governance framework for the integrated management of sargassum to reduce its impacts on marine ecosystems, communities' livelihoods and local industries (tourism and fisheries) from CLME countries. The project's Theory of Change (see graphic below) rests on overcoming the key barriers (identified above) that prevent long-term solutions integrated management of sargassum in the CLME, and thereby helping to address sargassum influxes which threaten not only the CLME marine and coastal environment but also local coastal economies and livelihoods. The project focuses on the regional (transboundary) level in line with GEF IW objectives (sustaining healthy blue ecosystems, sustainable fisheries management, shared stocks in the CLME), and the national level. It facilitates actions at the regional level with elements to ensure national level benefits. For instance, the establishment of the Regional Working Group will assist in advising and integrating sargassum related research and strengthening of forecasting models and early warning systems at both regional and national levels. More specifically, the project's approach is to promote cross sectoral collaborative efforts to maximize resources needed to promote integrated management interventions. In this context, it recognizes the importance of incorporating a gender perspective and strengthening community-based approaches to address the social impacts of Sargassum.

The project has 4 components with 29 outputs that together will deliver 9 project outcomes. These are presented in the Indicative Project Overview table above. The four components are as follows.

Component 1: Establishing effective regional governance for the integrated management of sargassum through dialogue and collaboration among countries, platforms, and relevant stakeholders in key countries of the CLME. This component aims to enhance collaborative and articulated joint action among international, national, and local stakeholders involved in initiatives focused on the integrated management of sargassum. A Regional Coordination Framework leaded by the participating CLME countries and supported by the Inter-American Council for Integral Development of the OAS and the Cartagena Convention, will be created for this purpose. The Framework will be technically supported by a Working Group (initially conformed on an *ad-hoc* basis) to develop a Regional Action Plan to consolidate project outputs from its four components, including: (i) the implementation of prioritized regional projects that promote integrated sargassum management; (ii) agreed measures to gradually overcome policy gaps and barriers to the effective management of sargassum; (iii) recommendations for response/management national plans and blue economy development based on exposure and vulnerability regional assessments; (iv) a regional data sharing mechanism to increase the robustness of forecasting models and early warning country systems; (v) systematized good practices and tools for regional sargassum regional integrated management as part

of regional capacity building, dialogue and dissemination events promoted throughout the wider CLME community.

Component 1 will produce two outcomes:

Outcome 1.1: Regional Caribbean and Interamerican Coordination Framework and Working Group established for the integrated management of sargassum.

Outcome 1.2: Members of the Coordination Framework develop an agreed Regional Action Plan including prioritized projects for the integrated management of sargassum, as well as regional scope outputs from the other three project components, incorporating a gender and intercultural perspective

An initial step will be the creation of a technical *ad-hoc* Regional Working Group to guide and coordinate regional scope project outputs and facilitate the establishment of the Coordination Framework and design of its Regional Action Plan. A comprehensive stakeholder analysis and engagement strategy will be developed to promote multilevel governance of sargassum management within the CLME, including all IW-GEF related projects in the region to contribute towards the Regional Ocean Coordination Mechanism, as key references to guide the process and seek effective collaboration. This strategy will identify key stakeholders, outline their roles and specific initiatives, and establish effective communication, learning and collaboration mechanisms to ensure the progressive adoption of a regional approach to the integrated management of sargassum generating recommendations for the creation of the Coordination Framework and inputs to the Regional Action Plan (Outputs 1.1.1, 1.1.3 and 1.2.1). The project will conduct an analysis of regional regulatory frameworks on sargassum in the CLME, including an inquiry into the incorporation of gender and intercultural approaches within the framework, to identify gaps, barriers and opportunities for enhancing integrated management practices (Output 1.1.2).

Once the Regional Coordination Framework is established, and its Regional Working Group is formalized as its permanent technical support body, it will conduct stakeholder regional workshops to incorporate findings and identify collaborative and joint measures with IW-GEF related projects in the CLME contributing as well to the Regional Ocean Coordination Mechanism (Output 1.2.1). These will provide inputs to agree a first Regional Action Plan for the integrated management of sargassum with a gender and intercultural perspective (Output 1.2.2). The Regional Action Plan will include the implementation of regional projects prioritized from a portfolio previously prepared

(Output 1.2.3) as well as regional scope outputs from the other three project components (described above). This Component largely addresses barrier 1 (See Figure 5 below, Theory of Change).

Component 2: Improving decision-making and response planning to sargassum influxes and promoting the use of forecasting tools and early warning systems for economic activities and Marine Protected Areas management. This component seeks to improve regionally oriented country level planning for and response to sargassum influxes across impacted regions, enhance coverage and regional scope of sargassum forecasting models and early warning systems and increase their end-user customization and uptake. The component has three outcomes:

Outcome 2.1: Countries with improved level of planning for response to sargassum influxes across impacted regions through exposure and vulnerability assessments and regular monitoring and evaluation.

Outcome 2.2: Improved precision, lead time, geographic coverage and regional scope of sargassum forecasting models and early warning systems using innovative, cost-effective technologies.

Outcome 2.3: Greater end-user customization and uptake of innovative sargassum forecasting tools and early warning systems by key stakeholder groups leads to improved integrated management, especially in tourism, fisheries and Marine Protected Areas.

Under this Component the project will provide guidance on assessing exposure and vulnerability to sargassum influxes, developing plans and monitoring and evaluating the occurrence of and response to influxes (Output 2.1.1). The project will carry out - coordinated by the Regional Working Group- sargassum influx exposure and vulnerability assessments incorporating a regional approach (Output 2.1.2) and develop/update and implement response and integrated management plans for each participating country (Output 2.1.3). Capacity building and operational targeted support will also be provided for two-years of M&E for selected response and integrated management plans (Output 2.1.3 and Output 2.1.4).

A regional data sharing mechanism to support validation of sargassum forecasting models will be developed and adopted, drawing on monitoring programmes and specialized international research to strengthen the referred models(Output 2.2.1). This will also contribute develop national sargassum Early Warning Systems, including their institutional arrangements, to inform response planning and decision-making with a regional scope (Output 2.2.2). The related activities will be done as well in close coordination with the Working Group. Implementation of Early Warning Systems will enable anticipatory action to threats to fisheries livelihoods, tourism livelihoods, social protection, food security and Marine Protected Areas management. It is expected that Early Warning Systems can be positioned under existing national disaster risk reduction management frameworks to ensure its sustainability. The Figure below presents a basic description of the components of the referred systems.

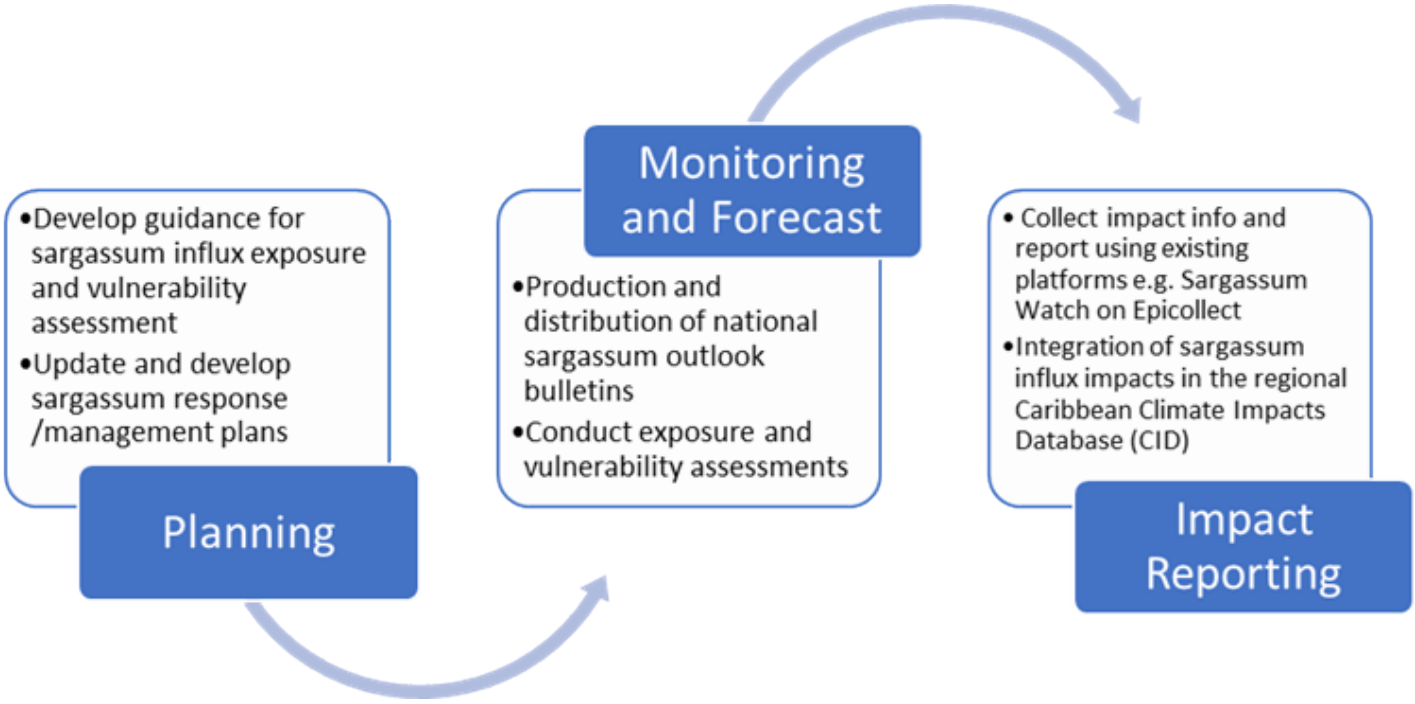


Figure 4: Components of A Proposed National Sargassum Early Warning System. Source: Elaborated by Authors

The success of these systems will depend on the institutional framework that supports their operations and administration. Guidance can be taken from the development of the World Meteorological Organization EWS4ALL initiative[1][11]. Terms of reference (TORs) for institutional arrangements for sargassum management and governance at the national level will be developed (as part of Output 2.2.2) These arrangements may look different in each project country. New arrangements may be needed e.g., the establishment of sargassum task forces or sargassum management committees. In other cases, existing national intersectoral coordinating

mechanisms such as climate change committees or national ocean governance committees can assume the role and support the operations of the systems.

Drawing on the outcomes under this Component, an assessment of the current coverage, uptake and end-user needs of forecasting and early warning initiatives in impacted regions will be carried out (Output 2.3.1). This assessment will inform the development of guidance for forecasting initiatives and Early Warning Systems on end-user needs and increasing uptake (Output 2.3.2). Stakeholders will be able to build their capacity to use adopted and innovative sargassum forecasting tools and Early Warning Systems (Output 2.3.3). Both the assessment and the development of guidance will support the development of a comprehensive communication and education strategy to support the uptake forecasting information and Early Warning Systems (Output 2.3.4). The plan will identify risk communication products including the importance of the development of seasonal sargassum outlook bulletins tailored to fisheries and tourism sectors (as part of Output 2.3.4). This Component largely addresses barrier 2, as depicted in the Theory of Change Figure 5 below.

Component 3: Promoting blue-growth initiatives and development of the blue economy through investment in sargassum valorization enterprises. This Component seeks to strengthen the enabling regulatory environment for better decision making, action and social protection through the promotion of feasible sargassum biobusiness as a means of alleviating influx impacts. The aim is that policy makers, funding institutions, private sector and communities can make informed decisions on the level and type of support to extend to biobusiness initiatives based on the findings and recommendations of a risk assessment and feasibility analyses of sargassum biobusinesses. Adding on these results the regional and national blue economy development will be underpinned through the creation and operation of a Sargassum Biobusiness Investment Fund (SBIF) focused on supporting feasible biobusinesses to scale up and expand in new markets while also promoting entrepreneurship for women, youth and marginalized groups such as rural coastal communities through a special financial window.

The Component has two Outcomes:

Outcome 3.1: Enabling regulatory environment ensured and feasible prioritized sargassum-based biobusiness initiatives promoted.

Outcome 3.2: Regional and national blue economy development underpinned through the creation and operation of a Sargassum Biobusiness Investment Fund (SBIF).

A feasibility analysis will specifically assess the risks and feasibility of sargassum biobusiness not only as an economic opportunity but as a means of alleviating influx impacts, with due attention of their contribution to conservation of marine ecosystems (Output 3.1.1). Additionally, a risk assessment to identify risks and issues associated with sargassum biobusiness will be conducted to provide recommendations for regulatory development (Output 3.1.2), as well as to the Regional Action Plan (Output 1.2.2). Sargassum valorization holds the promise of generating co-benefits across a spectrum of sectors. From environmental conservation to sustainable agriculture, from renewable energy to research and innovation and climate change mitigation,

sargassum can be transformed from a challenge into an opportunity. The proposed methodology for the assessment is a sargassum value chain analysis with case studies from participating countries/territories. The feasibility and risk assessments conducted will also generate recommendations for the National Blue Economy Strategies of participating countries (Output 3.1.3).

In addition, a Sargassum Biobusiness Investment Fund (SBIF) will be developed and piloted (Output 3.2.1) that specializes in helping sargassum biobusinesses scale up and expand in new markets– specifically in developing Caribbean countries –through strategic business development assistance, relationships with potential corporate, government, and NGO partners and customers, new financing sources, and implementation of mergers and acquisitions, as appropriate for each company and market (Output 3.2.2). The fund will be financed by CAF and a group of financial allies, GEF and other climate funds, with potential co-financing by national development banks that allow them to close the financial gaps and overcome the barriers identified. A sargassum entrepreneurship programme for youth, women and marginalized groups will also be designed, launched, and implemented (Output 3.2.3) as a special window of the SBIF to provide small grants to booster start-ups and provide comprehensive capacity building focused on community-based initiatives, which will be provided with the necessary means to put in place their business models and generate income (Output 3.2.4).

The component will address barriers 3 and 4 described in Figure 5 below.

Component 4: Supporting knowledge management, mobilization and scale-up. This component will widen the existing knowledge for the effective management of sargassum influxes. This includes knowledge generation, space for co-learning with other projects and efforts, and target awareness raising of key audiences to contribute to resilient coastal ecosystems, cohesive research network, and dissemination of lessons and best practices systematized from scalable project experiences on sargassum regional integrated management through IW:LEARN and other relevant knowledge management tools. Also, the effective gender-sensitive and gender-responsive project will be ensured through their mainstreaming and compliance employing the M&E system.

The component has two Outcomes:

Outcome 4.1: Knowledge management systems, co-learning initiatives, and the dissemination of resources and key insights for the integrated management of sargassum influxes are in place.

Outcome 4.2: Effective gender-sensitive and gender-responsive project implementation based on adaptive management.

Since the initial arrival of sargassum influxes on Caribbean coasts, there has been a significant increase in interest in understanding and adapting to this environmental challenge. The Sargassum Hub serves as a central repository for key information and knowledge on sargassum influxes, including scientific research, policy initiatives, and more. Apart from UNEP's Sargassum White Paper, there is limited guidance available for the

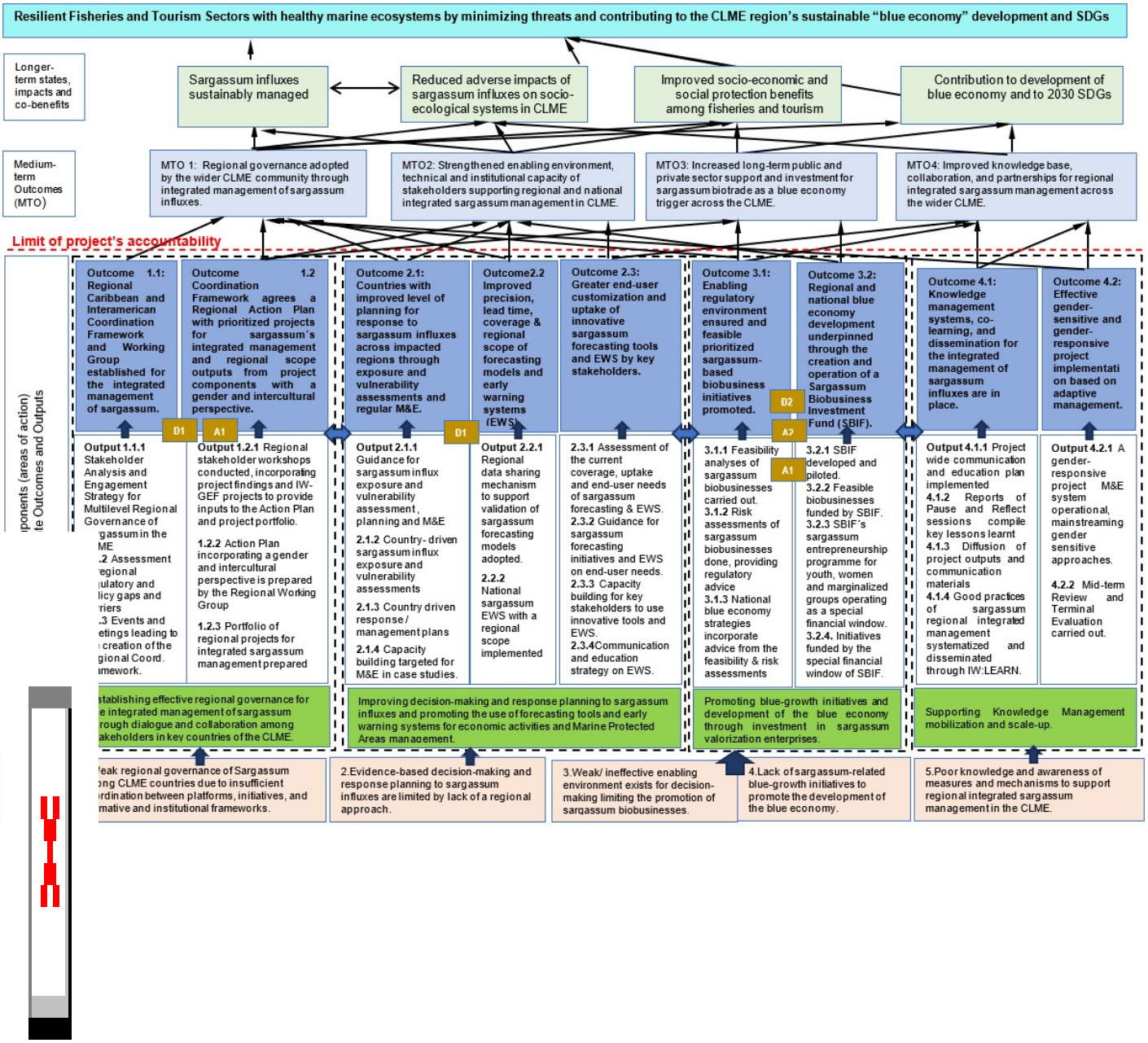
integrated management of sargassum influxes at the regional level. This component also presents an opportunity to leverage the IW:LEARN platform for preserving institutional memory and reaching a wider audience both within the Caribbean and in other regions affected by similar issues, such as the Yellow Sea and West Africa.

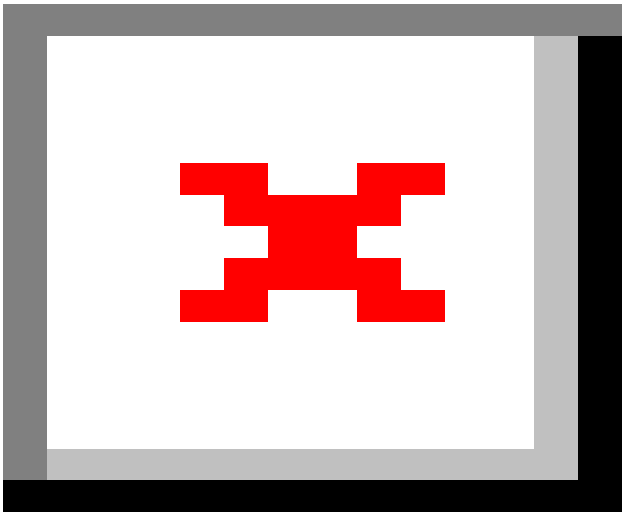
The project will implement a targeted communication and education plan to facilitate an effective learning process and ensure the widespread dissemination of project resources (Output 4.1.1). This plan will build upon the stakeholder mapping exercise to be completed during the full proposal development, with a special focus on engaging key groups such as government agencies, research institutes, the tourism and fisheries industries, and coastal communities. Special attention will be given to coastal communities and vulnerable groups to ensure their access to the project information through adequate means (radio, WhatsApp news, etc.) and content design (videos, audios, etc.) Reports of Pause and Reflect sessions that compile key lessons learnt will be published (Output 4.1.2), and project outputs together with results notes and other communication materials will be disseminated through the IWLearn.net website, sargassum hub, and other inclusive listserve and WhatsApp news (Output 4.1.3). Good scalable practices and tools for sargassum regional integrated management in the CLME Countries will be systematized and disseminated through IW:LEARN technical publications and platform. The project will also participate in IW- Biennial Conferences and promote regional workshops and twinnings with the CLME countries through IW:LEARN (Output 4.1.4), contributing directly to enhance the regional governance approach of the project.

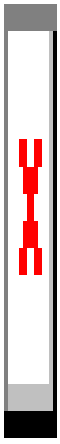
The component includes a gender-responsive project Monitoring and Evaluation (M&E) system using data disaggregated by sex, age and ethnicity designed and operational, as well as mainstreaming gender-sensitive approaches in all project activities, in line with CAF and GEF requirements. (Output 4.2.1). This will complement the project´s Social and Environmental Safeguards Plan, which will include a grievance mechanism and a gender action plan, to mitigate potential negative environmental or social impacts, such as the exacerbation of gender disparities. Finally, the Mid-term Review and Terminal Evaluation carried out through Component 4, as part of effective management practices (Output 4.2.2).

[1] https://public.wmo.int/en/earlywarningsforall.

The Project´s corresponding Theory of Change (ToC), including linkages, assumptions, drivers and longer-term outcomes and impacts is described in Figure 5 below. Please note that in the figure A = Assumption; D = Driver. Arrows depict major linkages; lesser ones are not shown


Resilient Fisheries and Tourism Sectors with healthy marine ecosystems by minimizing threats and contributing to the CLME region's sustainable "blue economy" development and SDGs
Longer-term states, impacts and co-benefits
Sargassum influxes sustainably managed
Reduced adverse impacts of sargassum influxes on socio-ecological systems in CLME
Improved socio-economic and social protection benefits among fisheries and tourism
Contribution to development of blue economy and to 2030 SDGs
Medium-term Outcomes (MTO)
MTO 1: Regional governance adopted by the wider CLME community through integrated management of sargassum influxes.
MTO2: Strengthened enabling environment, technical and institutional capacity of stakeholders supporting regional and national integrated sargassum management in CLME.
MTO3: Increased long-term public and private sector support and investment for sargassum biotrade as a blue economy trigger across the CLME.
MTO4: Improved knowledge base, collaboration, and partnerships for regional integrated sargassum management across the wider CLME.
Limit of project's accountability
Outcome 1.1: Regional Caribbean and Interamerican Coordination Framework and Working Group established for the integrated management of sargassum.
Outcome 1.2 Coordination Framework agrees a Regional Action Plan with prioritized projects for sargassum's integrated management and regional scope outputs from project components with a gender and intercultural perspective.
Outcome 2.1: Countries with improved level of planning for response to sargassum influxes across impacted regions through exposure and vulnerability assessments and regular M&E.
Outcome2.2 Improved precision, lead time, coverage & regional scope of forecasting models and early warning systems (EWS).
Outcome 2.3: Greater end-user customization and uptake of innovative sargassum forecasting tools and EWS by key stakeholders.
Outcome 3.1: Enabling regulatory environment ensured and feasible prioritized sargassum-based biobusiness initiatives promoted.
Outcome 3.2: Regional and national blue economy development underpinned through the creation and operation of a Sargassum Biobusiness Investment Fund (SBIF).
Outcome 4.1: Knowledge management systems, co-learning, and dissemination for the integrated management of sargassum influxes are in place.
Outcome 4.2: Effective gender-sensitive and gender-responsive project implementation based on adaptive management.
D1
A1
D1
D2
A2
A1
Output 1.1.1 Stakeholder Analysis and Engagement Strategy for Multilevel Regional Governance of gassum in the ME
.2 Assessment egional ulatory and licy gaps and riers
.3 Events and etings leading to creation of the gional Coord. mework.
Output 1.2.1 Regional stakeholder workshops conducted, incorporating project findings and IW-GEF projects to provide inputs to the Action Plan and project portfolio.
1.2.2 Action Plan incorporating a gender and intercultural perspective is prepared by the Regional Working Group
1.2.3 Portfolio of regional projects for integrated sargassum management prepared
Output 2.1.1 Guidance for sargassum influx exposure and vulnerability assessment, planning and M&E
2.1.2 Country- driven sargassum influx exposure and vulnerability assessments
2.1.3 Country driven response / management plans
2.1.4 Capacity building targeted for M&E in case studies.
Output 2.2.1 Regional data sharing mechanism to support validation of sargassum forecasting models adopted.
2.2.2 National sargassum EWS with a regional scope implemented
2.3.1 Assessment of the current coverage, uptake and end-user needs of sargassum forecasting & EWS.
2.3.2 Guidance for sargassum forecasting initiatives and EWS on end-user needs.
2.3.3 Capacity building for key stakeholders to use innovative tools and EWS.
2.3.4Communication and education strategy on EWS.
3.1.1 Feasibility analyses of sargassum biobusinesses carried out.
3.1.2 Risk assessments of sargassum biobusinesses done, providing regulatory advice
3.1.3 National blue economy strategies incorporate advice from the feasibility & risk assessments
3.2.1 SBIF developed and piloted.
3.2.2 Feasible biobusinesses funded by SBIF.
3.2.3 SBIF's sargassum entrepreneurship programme for youth, women and marginalized groups operating as a special financial window.
3.2.4. Initiatives funded by the special financial window of SBIF.
Output 4.1.1 Project wide communication and education plan implemented
4.1.2 Reports of Pause and Reflect sessions compile key lessons learnt
4.1.3 Diffusion of project outputs and communication materials
4.1.4 Good practices of sargassum regional integrated management systematized and disseminated through IW:LEARN.
Output 4.2.1 A gender-responsive project M&E system operational, mainstreaming gender sensitive approaches.
4.2.2 Mid-term Review and Terminal Evaluation carried out.
stablishing effective regional governance for e integrated management of sargassum rough dialogue and collaboration among akeholders in key countries of the CLME.
Improving decision-making and response planning to sargassum influxes and promoting the use of forecasting tools and early warning systems for economic activities and Marine Protected Areas management.
Promoting blue-growth initiatives and development of the blue economy through investment in sargassum valorization enterprises.
Supporting Knowledge Management mobilization and scale-up.
eak regional governance of Sargassum ong CLME countries due to insufficient rdination between platforms, initiatives, and mative and institutional frameworks.
2.Evidence-based decision-making and response planning to sargassum influxes are limited by lack of a regional approach.
3.Weak/ ineffective enabling environment exists for decision-making limiting the promotion of sargassum biobusinesses.
4.Lack of sargassum-related blue-growth initiatives to promote the development of the blue economy.
5.Poor knowledge and awareness of measures and mechanisms to support regional integrated sargassum management in the CLME.





noted that several of the above Outcomes, both within and between components, interlink and work r are dependent on the progress and results of others (as depicted by the network of arrows in Figure phical representation of the ToC). Note that arrows in the graphic indicate a connection (linkage, ip) between project components, and the direction of arrows indicates how an element leads to, or s to, one or more others (which may illustrate how one element may be dependent on another being . So, for instance, the arrows can indicate how direct results of the project (outputs) can combine to vider changes (immediate project outcomes) which themselves may contribute to longer-term changes and long-term changes in behavior, systems and states). Arrows that point both left and right indicate flow of results from one component to another. For example, information from components 1-3 feeds opment of deliverables under Component 4.

The causal flow of results in the ToC (from output to project outcome to wider, longer-term changes in state) also depends on a series of assumptions and drivers (indicated in the graphic) that may influence the linkage (relationship) between the elements of the ToC. Achievement of the immediate project components and outcomes above will contribute to wider changes and impacts over the longer term as set out in the Theory of Change graphic above.

In addition, the achievement of the project outcomes and progress towards the project objective and longer-term impacts depends on a number of wider assumptions[1] being met. Assumptions that directly relate to the achievement of the project's immediate outcomes are:

A1: Social and cultural barriers do not prevent women, youth and marginalized groups from effectively participating in integrated management of sargassum influxes.

A2: The private sector is willing (or can be encouraged) to invest in activities to new sargassum business opportunities and to provide a supportive environment for integrated sargassum management.

In addition, operation of the project itself rests on several preconditions, including that: (i) the project can secure the external expertise and technical assistance required for a full and timely implementation of project activities (needed for delivery of all Components, but especially Components 1-3); (ii) there is continued commitment of the participating institutions and actors from national to community level during the project lifetime, manifest through their continued staff involvement and co-financing contributions; (iii) there are no major political changes in participating countries that would prevent the project's institutional framework from continuing to operate and deliver project results inter alia.

Conversely, there are several impact drivers[2]12 that may make progress towards the achievement of project outcomes more likely, notably:

D1: Increased awareness among government decision and policy makers about their role in the integrated management of sargassum, sargassum biobusiness and other opportunities offered by the use of sargassum in blue growth and blue economy development simultaneously conserving critical marine and coastal ecosystems from influxes.

D2: The fishing and tourism industries are keen to engage in new business ventures related to sargassum biobusiness.

If the project outcome-level assumptions and impact drivers (A1-2 and D1-2) are met, then delivery of the four project Components will result in further gains along the causal pathway.

ii. Areas to be targeted by the project

An informal technical advisory group/committee, composed of focal points and experts from all the participating project countries would be established during the PPG phase. Using agreed selection criteria, this group/committee will assist in the identification of target areas under the project during the PPG Phase.

iii. Global environmental benefits which would not have accrued without the GEF project

Given that the impacts of sargassum influxes are experienced and shared among the CLME countries, a GEF investment in developing a regional integrated approach to the management of sargassum, including capacity and institutional building, data coordination and joint public-private frameworks, will lead to substantial improvement in marine ecosystem health and resilience and socio-economic well-being in the CLME region. One of the first steps in ecosystem resilience planning is conducting vulnerability and exposure assessments. Too often interventions are made without up-to-date data to support appropriate strategies and interventions, resulting in inefficient allocation of resources and further harm to coastal ecosystems. This GEF Project aims to provide a foundation for proactive management and decision-making through country-driven sargassum influx exposure and vulnerability assessments that incorporate a regional approach. These assessments will provide decision makers with detailed information on ecosystems that are most vulnerable to sargassum influxes. Moreover, they can inform sustainable resource use practices by identifying areas that are most vulnerable to negative impacts.

This GEF Project will also enhance regionally based forecasting products, which in combination with exposure and vulnerability assessments can facilitate the development of strategies to protect these habitats and ensure their continued ability to provide ecosystem services (i.e., inform ecosystem restoration and conservation efforts). With this knowledge, activities such as fishing, recreational activities, and development can be guided, to limit disruption or harm to ecosystem services. To further mitigate the negative impacts to coastal ecosystems, this GEF Project explores opportunities for sargassum biobusinesses to reduce the risk of smothering these habitats, thus preserving their ecological function and biodiversity. Not only does converting sargassum biobusiness promote a circular economy but some products, such as biofuel, can contribute to global climate change mitigation by providing alternative energy sources and reducing reliance on fossil fuels.

The business-as-usual scenario, will continue to be governed by fractured country-specific reactive responses that fail to capture the economies of scale of regional cooperation in the CLME to address accordingly this challenging phenomenon. Decision-making and response planning to sargassum influxes will continue to be limited by myopic forecasting models and early warning systems that are not specifically tailored to tourism and fisheries sectors nor have a regional scope; a weak/ineffective enabling environment will exist for decision-making, action and social protection to support the promotion of sargassum biobusiness with contradicting regulations that hinder the income generating opportunities of its management through a Blue Economy approach; and information available on measures and mechanisms to support regional integrated sargassum management will continue to be limited and fragmented across platforms.

On the other hand, if a GEF intervention is designed to promote the Integrated Management and Regional Governance of Sargassum in a joint collaborative effort among CLME countries, the above limitations may be overcome to address related challenges. Regional innovation will cover capacity building, institutional and regulatory strengthening and knowledge management mechanisms to promote coordination and synergies among participants. Their aim will be to attain a whole-CLME scope that will ensure on-going initiatives (especially other GEF IW projects) are acknowledged and effective coordination mechanisms implemented. Also, the promotion of biobusinesses through a regional fund, the Sargassum Biobusiness Investment Fund (SBIF) will have a leverage effect to promote sustainable income generation throughout the CLME while attracting private investment to tackle the referred problem. Furthermore, lessons learned and best practices

from the project will serve to other regional ocean-wide efforts and coordination mechanisms urgently needed to tackle climate change related problems.

iv. Stakeholders and their respective roles, contributions, and benefits

Effective management of sargassum influxes requires a concerted effort involving a multitude of stakeholders from government agencies, private sector, civil society, and community groups. Government agencies, particularly the fisheries and tourism departments, play pivotal roles in the effective management of sargassum influxes, given their direct engagement with sectors profoundly affected by these events. They are responsible for data collection, providing insights into potential mitigation measures, contributing to monitoring efforts, policy development, regulation enforcement, and coordinating responses to sargassum events. Involvement in this GEF Project offers fisheries and tourism agencies a range of benefits that contribute to environmental protection, economic sustainability, and public well-being. Some of these include access to tools and capacity building for improved sargassum research and monitoring, increased institutional capacity to respond to sargassum influxes, biodiversity conservation, advanced climate change adaptation and ecosystem-based adaptation agendas and strengthened public-private partnerships.

The private sector plays a vital role in sargassum management through its capacity to innovate, provide resources, and contribute to solutions that address the impacts of sargassum influxes. The project will develop strong partnerships with the private sector, especially those with responsibility for enterprise development and entrepreneurship. The private sector will be key actors in activities which relate to sargassum biobusiness and market development. Relevant stakeholders will be engaged to identify options for financial incentives that will facilitate buy-in and scaling up of sargassum businesses. They will also be supporting capacity building and training programmes. Additionally, researchers at national institutes conducting research (e.g., oceanography, fisheries, tourism, and product development) will contribute to the development of forecasting models, guiding the development of sustainable management strategies and implementing proactive measures. The private sector can position itself to take advantage of these potential benefits in the context of the project, including enhanced corporate social responsibility; enhanced collaboration and partnership, innovation and technological advancements; economic diversification and long-term environmental stewardship.

Equally key stakeholders are the artisanal fishers and tourism operators on the frontlines of sargassum impacts (along with their associated fishing and tourism communities) and who would also be most directly affected by any new national or regional level sargassum response/management measures closed areas/seasons. These key actors have a direct interest in maintaining clean and attractive beaches and protecting fishing grounds. They will be responsible for providing local knowledge on impacts on coastal and marine resources, implementing mitigative actions and cooperating with authorities for efficient responses. Key benefits of the project to fisherfolk and tourism operators include provision of timely information and alerts on impending influxes to facilitate precautionary action, greater knowledge of effective mitigation measures, support in resilience building, access to resources and training, diversification of income streams and participation in decision-making.

Given the transboundary nature of these events, the engagement of international stakeholders brings forth collaborative solutions that transcend borders and amplify the effectiveness of management strategies. The project will involve a wider group of international strategic partners (e.g., NOAA, IOC UNESCO, GEO Blue

Planet, UNEP, UNDP Accelerator Lab) to provide expertise, technical support and best practices sharing especially as it relates to improving forecasting products and promoting blue initiatives. Involvement in this GEF Project can derive the following benefits to international partners: demonstration of global environmental stewardship by assisting regions impacted by sargassum events, enhanced reputation as global leaders in sustainable environmental management, increased knowledge exchange and learning, global networking and advancing global climate change adaptation, disaster risk reduction and management, social protection, nature-based solutions (NbS) and ecosystem-based adaptation agendas.

v. Strengthening and alignment with existing national policies (policy coherence)

The SargMarine project is based on the key recommendations and identified gaps of the 2021 update of the UNEP-CEP Sargassum White Paper, the Cartagena Convention and its Specially Protected Areas and Wildlife (SPAW). It also builds on the key outcomes and lessons learnt from previous projects such as the CLME and CLME+ projects.

The project will articulate with the PROCARIBE+ and other future relevant projects to provide the resources needed to implement and sustain the general recommendations articulated in the paper including:

- Increasing the collaboration and joint programming between the Specially Protected Areas and Wildlife (SPAW) Protocol to the Cartagena Convention, particularly in the context of the SPAW Sargassum Working Group.
- Developing further cooperation with relevant organisations and initiatives in order to minimize duplication and enhance SPAW programme delivery.
- Collaborating with the Abidjan Convention (West Africa) and others such as the GEO- BluePlanet (Sargassum Information Hub) and Florida International University (SargNet) with the objective of consolidating a common platform for Sargassum management in the Wider Caribbean and West Africa.

The project supports participating countries in their efforts in achieving several of the:

UN Sustainable Development Goals:

- Goal 5: Gender Equality through the promotion of equal ease of access to resources and opportunities regardless of gender in all sargassum-related activities.
- Goal 7: Affordable and Clean Energy through the contribution sargassum biobusiness can play in energy security.
- Goal 8: Decent Work and Economic Growth through the diversification and growth of sargassum-based economic sectors.
- Goal 9: Industry, Innovation and Infrastructure through exploring the feasibility of developing sargassum industries as a means of alleviating influx impacts.
- Goal 13: Climate Action through the implicit link between the oceans and climate change, and the adaptive measures countries can take to maintain ocean integrity and resilience to sargassum influxes.

- Goal 14: Life Below Water through identifying risks to the marine environment including sargassum influxes, especially to marine living resources, and proposing strategies that mitigate those risks.
- Goal 16: Strong Institutions through establishing robust governance mechanisms and incorporating participatory processes in decision-making about marine management issues; and
- Goal 17: Partnerships for the Goals through promoting collaboration of regional partners working at the science-policy interface as it relates to sargassum influx management and governance.

2030 target of the Kunming-Montreal Global Biodiversity Framework:

- Target 2: Restore 30% of all degraded ecosystems
- Target 6: Reduce the introduction of invasive alien species by 50% and minimize their impact
- Target 11: Restore, maintain and enhance nature's contributions to people
- Target 19: Mobilize $200 billion per year for biodiversity from all sources, including $30 billion through international finance.
- Target 20: Strengthen capacity-building, technology transfer, and scientific and technical cooperation for biodiversity
- Target 21: Ensure that knowledge is available and accessible to guide conservation actions.
- Target 22: Ensure participation in decision-making and access to justice and information related to biodiversity for all.
- Target 23: Ensure gender equality and a gender-responsive approach for biodiversity action.

SPAW-RAC Strategic Plan 2023-2028

- Strategic objetive 1.2.1: Develop the mission of scientific and technical assistance to the Parties.
- Strategic objetive 1.2.2: Strengthen regional cooperation.
- Strategic objective 2.2.1: Strengthen the visibility of the Protocol Increase the visibility of the SPAW-RAC, so that it is easily identifiable and accessible to the target audience(s).

The Strategic Action Programme for the Sustainable Management of the Shared Living Marine Resources of the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ SAP)

- Strategy 1: Enhance the regional governance arrangements for the protection of the marine environment.
- Strategy 3: Establish and operationalize a regional policy coordination mechanism for ocean governance with initial focus on shared Living Marine Resources

vi. Knowledge generation, management and exchange

A vast and growing amount of communication materials outline the existing knowledge of sargassum biology, monitoring tools and forecasting systems. Since 2021, the Sargassum HUB has centralized most of that information and made it available to policy makers, researchers, business owners, coastal communities and general audiences.

Despite such efforts, the information available on measures and mechanisms to support integrated sargassum management remains quite limited. For instance, IW:LEARN showcases a limited number of projects addressing sargassum influxes worldwide. Nonetheless, within the IW:LEARN framework, the project will promote the scaling up of lessons learned and best practices generated by the Common Oceans Programme, which is funded by the GEF, to the project beneficiary countries. In this regard, in coordination with IW:LEARN, the project will encourage the enhancement of knowledge among policymakers from the governments, executing agencies, and identified partners through stakeholder analysis and the stakeholder engagement strategy. In sum, this project will promote direct (training, learning exchange, etc.) or indirect (through knowledge platform) effective sharing of lessons learning, knowledge resources, good practice guides, among others. Learning exchanges between countries and current and future related projects (CARIBE+, and other) within and beyond the project area may increase the awareness of stakeholders and inspire action.

The project will produce considerable knowledge and resources across all its components, which will be integrated and disseminated mainly through the project´s communication and education plan of Component 4 and Component´s 2 specific strategy for sargassum forecasting initiatives and early warning systems. Overall, knowledge management will be address through Component 4. This component will focus on widening our existing knowledge about sargassum influxes as well as integrated management, with the aiming at raising awareness, promoting learning and continuous improvement (linked to project M&E activities), generating content for up-scaling of project achievements, lessons, and good practices, enable institutional memory, and supporting stakeholder engagement on key issues related to integrated management of sargassum in the CLME. The project will support capacity building and training actions under all the components. Online/virtual training and information exchange are expected to play a significant role in the project's KM approach and will be supported through IW:LEARN as relevant and the creation of a dedicated digital project KM platform (part of the project website). The project will also host in-person fora, meetings, workshops, as well as maintaining informal communication with key stakeholders through a project listserv and other means (e.g., Facebook group, WhatsApp group). Project results, experiences, lessons learned and recommendations for successful implementation of effective, integrated sargassum management measures in the CLME will be produced and disseminated via relevant national, regional, and global platforms, including existing CAF, Sargassum Hub, IW:LEARN,and project partner websites. A broader dissemination of experience and lessons learnt generated by the project will be pursued through engaging national and regional technical and educational institutions, and regionally and internationally through South-South cooperation mechanisms. Additionally, this component will develop a comprehensive systematization of good regional practices and lessons learned related to sargassum management. To effectively account for the approach to gender and community issues, systematizations will include an analysis of how these topics have been addressed in the context of OAS and GEF gender mainstreaming initiatives.

vii. Transformational and innovative nature of the project and scaling up

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Innovation/transformation: Sargassum influxes have been a catalyst for innovation and have the potential to form part of a sustainable and equitable blue recovery to the COVID-19 crisis. Shifting the sargassum influx paradigm from hazard to opportunity is the best-case scenario for reducing vulnerability and increasing resilience to this new phenomenon. Merging opportunity and adaptation may offer SIDS and developing countries potential solutions that are both independent of fraught global efforts on climate change mitigation

and directly beneficial to their vulnerable economies. This paradigm shift requires not just developing technologies, capacities, and safeguards and creating the appropriate enabling environment on a national basis. A regional approach is needed to overcome myopic interventions that fail to understand the transboundary nature of this phenomenon. Strengthening the regional governance for the integrated management of sargassum is a necessary condition to reduce its impacts on marine ecosystems, communities' livelihoods and local industries.

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Scaling up of project results and successes will be achieved through the project's Knowledge Management activities under Component 4. The feasibility assessment of Component 2 seeks to make a determination in order to inform decision making and policy. This project aims to support this paradigm shift, if feasible, by promoting synergies between existing initiatives and fostering collaboration. Beyond the project's lifetime, GS/OAS and CAF Secretariat will continue to collaborate with implementing partners to establish sustainable financing mechanisms to support project initiatives. Key achievements of the project will be promoted and mainstreamed into existing institutional arrangements. Member states will be encouraged to get buy-in from policy makers to sustain initiatives. The participatory monitoring and evaluation framework established from the project inception will be used to track progress after the project is implemented to determine its impact and potential for scaling up and replicating in other impacted regions.

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[1] *Assumptions are defined here as external factors or conditions that need to be present for change to happen but are beyond the power of the project to influence or directly address, e.g., turnover of government officials, global financial situation.*

[2] *Impact drivers defined here as significant external factors that can positively influence the direction of change along the project's causal pathways from outputs to outcomes to impacts, and over which the project, or its stakeholders/partners has some degree of control or influence, e.g. public pressure on decision-makers through KM and advocacy activities.*

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

The project will build on previous efforts and will build synergy with ongoing and future projects, particularly those mentioned in the baseline section. During the further development of the proposal (PPG phase) and inception phase (implementation), the project managing team will consulate and learn from the lessons of of the institution that implemented previous projects such as the CLME and CLME+ projects and other led by the Caribbean Regional Fisheries Mechanism, research institutions (UWI, national research center), fishers associations (Caribbean Network of Fisherfolks Organisations), among others.
The project will build synergies and strengthen the collaboration across the Caribbean and West Africa. Memorandum of Understanding and/or partnership agreement will be signed with ongoing and future conservation projects in the CLME+ and West Africa to formalize and catalyze synergies. Additional mechanisms include i) participation of ongoing projects in the regional platforms of component 1 of the proposed project and ii) coordinated participation in the IW:LEARN events. The list of projects includes, but it is not limited to the CAF project BE-CLME+ (continuity of efforts in similar locations) as well as the PROCARIBE+ (complementary topics in similar locations).

Other potential projects/initiatives with which partnerships and linkages will be explored include:

- Sargassum Info Hub
- UNDP's 'Enabling a Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER)' project.
- • UNDP's Japan funded 'The Project for Improving National Sargassum Management Capacities in the Caribbean' project.

There are also several global CAF-led projects which potential synergies with the SargMarine project with which linkages, including: Programme on sustainable tourism in the Caribbean

Core Indicators

Indicator 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
16,150,970.00			

Indicator 5.1 Fisheries under third-party certification incorporating biodiversity considerations

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Type/name of the third-party certification

Indicator 5.2 Large Marine Ecosystems with reduced pollution and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE

Indicator 5.3 Marine OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 7 Shared water ecosystems under new or improved cooperative management

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Shared water Ecosystem	Caribbean sea			
Count	1	0	0	0

Indicator 7.1 Level of Transboundary Diagonostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)

Indicator 7.2 Level of Regional Legal Agreements and Regional management institution(s) (RMI) to support its implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Caribbean sea	4			
Caribbean sea	4			

Indicator 7.3 Level of National/Local reforms and active participation of Inter-Ministeral Committees (IMC; scale 1 to 4; See Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Caribbean sea	4			

Indicator 7.4 Level of engagement in IWLEARN throgh participation and delivery of key products(scale 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Caribbean sea	4			
Caribbean sea	4			

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	33,513			
Male	271,150			
Total	**304,663**	**0**	0	**0**

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

Core Indicator 5 – Area of marine habitat under improved practices: Exclusive Economic Zone (EEZ) extents: Colombia 706,134 km2; Dominican Republic 246,454 km2; Grenada 27,426 km2; Jamaica 274,000 km2;Panama 274,600 km2; Saint Lucia 11,483 km2;Trinidad and Tobago 75,000 km2. The expected area of marine habitat under improved practices is calculated as the 10% of the overall EEZ (1,615,097 km2).

This percentage has been proposed for the PIF phase as a rough, conservative initial estimate. During the PPG, inclusive and participatory mapping processes will be conducted with government agencies, coastal communities, tourism industries and other key stakeholders to refine the direct areas of implementation. Criteria for selection will be agreed with focal points, including but not limited to: (i) identified OECMs Areas; (ii) co-management areas and (iii) locally managed marine areas.

Core Indicator 7 – Number of shared water ecosystems: One, the Caribbean Large Marine Ecosystem (CLME). Indicators 7.2, 7.3 and 7.4 have been included and the methodology for their measurement will apply the GEF-8 measurement framework guidance.

Core Indicator 11 – The number of direct beneficiaries considers different metrics for the value chain (3 people per 1 fisher) and number of people in households (2 additional people per household per 1 fisher), recognizing that all members benefit from sargassum management. Based on available FAO Statistics and Information , figures refer to the total number of persons that were employed in small-scale fisheries sectors (Colombia: 34,170 persons; Dominican Republic: 8,400; Grenada: 3,500; Jamaica 24,467; Panama: 37,280 persons; Saint Lucia 3,328 and Trinidad and Tobago: 10,720 persons) (total – 121,865). The core indicator target is based on 50% of the total number of persons involved in the relevant fisheries and tourism sectors following guidance from regional experts. This number is then multiplied by a factor of 5 to represent the number of people working with each fisher in a value chain plus the additional people in their households, resulting in 304,663 direct beneficiaries (271,150 males; 33,513 females). In these countries, on average approximately 11% of fishers are women.

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	Moderate	Risk: 1. Extreme seasonal climate events, such as tropical cyclones, may temporarily affect project execution (Travel and meeting, fieldwork, etc.). 2. Increased level of sargassum influxes in the Caribbean coasts when favorable climate and environmental conditions (temperate Ocean SST, higher amazon river discharge, stronger upwelling in West Africa and other environmental factors). 3. Other climate impacts, such as ocean acidification, sea level rise, etc. are real, but may not significantly increase or decrease during the period of the project (5 years). Mitigation: The project will employ an adaptive management approach to project execution with a funded M&E system in place from the start to mitigate any climate-related events during the project. Beside the M&E system, 1. The project will consider the high season of hurricanes in the Caribbean when conducting its Annual Operating Planning. 2. Given that the climate and environmental factors for sargassum influxes are out of control of any project, the project is centering its efforts in the forecasting and early warning systems, among other actions, to help the implementation of adaptation measures. 3. Other climate and environmental variables will be monitored to improve the robustness of the forecast system, as well as contribute to improve our knowledge about the factors behind the sargassum influxes in the Caribbean and beyond
Environmental and Social	Moderate	Risk: - Environmental – No additional risk is foreseen as a result of the project implementation on key habitats (SD/PL/03 standard 2). Environmental pollution may result from the adoption of bioeconomy alternatives for sargassum (untreated waste) and/or poorly planned sargassum disposal led by government agencies and social groups (beach cleaning) (SD/PL/03 standard 1). - Social – Local disease outbreaks may lead to lower engagement, fewer in person meetings, and delays in project execution, particularly for those project

		partners where staffing and capacity are less available (SD/PL/03 standard 1 & 8). Mitigation: -Environmental: The project is focusing on restoring coastal habitats following standard 2 of the SD/PL/03. The project will observe and comply with standard 1 and 2 of the SD/PL/03, including environmental impacts assessment where needed at the appropriate level. This includes the compliance with the standards by partners and contracts. -Social - The project will observe and comply with standard 3 and 8 of the SD/PL/03, including the development and dissemination of grievance mechanisms. In case of working with Indigenous People, the project will establish a Free, Prior, Informed Consent system. Also, the project will use online platforms to implement activities to the extent feasible (employing practices and lessons gained during past outbreaks like the COVID pandemic) which also minimizes the risk of disease
Political and Governance	Moderate	Risk: Low commitment and engagement in project from key partners and government institutions to engage in design of the full project and its implementation (poor political support, staffing/capacity, co-financing, and/or changed priorities due to adverse economic conditions or changes in Governments). Mitigation: The SargMarine project has been designed to respond to, and directly support, the national priorities of the participating countries and to meet national and regional (CLME) level priorities to address management of sargassum. For instance, the project explicitly supports the need strengthen the enabling environment for decision making, action and social protection including policy regulation needs. In addition, CAF has a long-established relationship with the target country's lead national institutions on which the project will build. The project will also leverage existing coordinating and cross-cutting inter-governmental and trans-boundary mechanisms that address the lack of integrated management of sargassum
INNOVATION		
Institutional and Policy	Low	Risk: The policy recommendations proposed under the project (Component 2) may not be approved, fully adopted and under implementation by participating governments within the 5 years of the project, due to the short timescale and/or because there are insufficient Government resources to ensure their approval and subsequent execution. Mitigation: Participating governments have already shown their commitment to the project. Additionally, given the sargassum influx challenges faced by the participating countries, a significant change of strategies and policies is not likely which will assist in ensuring that they adopt and remain committed to the recommendations produced under this project
Technological	Low	Risk: There are few technical risks to the project, as most of the technological approaches adopted by the project have been tested – exposure and vulnerability assessments (under Component 1) and risk assessment and feasibility analysis (under Component 2). Mitigation: The project has strong technical backstopping by CAF and the project will have technical expertise available from its country offices in all four participating countries. The

		management of the project will also follow an adaptive management approach with a ring-fenced funded project M&E system.
Financial and Business Model	Low	Risk: Global recession(s) may impact the amount of government and donors' co-financing contributions to the project during its implementation. Some countries in the Caribbean region are facing significant economic challenges that may impact financial commitments to the project. Mitigation: The project is structured so that if there is a cut in funding, the scope of the project may be revised or reduced accordingly. For example, this could involve virtual capacity-building activities instead of in-person meetings to save funds, etc.
EXECUTION		
Capacity	Low	Risk: Lack of institutional expertise on the national and regional level to deliver capacity building activities. Mitigation: Where capacity is considered limited, such as experience of developing country-driven sargassum response/management plans (agreed fisheries management plans (Component 1), it will be built through the project. Assessments of institutional (both national and local) expertise and resources will be undertaken during the PPG phase with recommendations to address these built into project activities (through training workshops, etc.). In addition, CAF will provide specialized capacity support to the project through its technical units, and a sustainability plan will be developed during the last year of the project to ensure there is a clear road map with resources identified to ensure that project results will be sustainable
Fiduciary	Low	Risk: Potential mismanagement of donor funds Mitigation: CAF has comprehensive financial management and procurement systems in place that ensure no misuse of funds will occur. CAF will be fully responsible for administering the funds following the CAF and GEF financial regulations, rules, policies and procedures, and administrative instructions, in accordance with the common UN practices. A key condition of the project's executing partner will be the requirement to have passed a CAF-led fiduciary assessment (or already been approved by an equivalent body) and procurement process will follow CAF rules.
Stakeholder	Moderate	Risk: Women may be less able to participate and benefit from the project due to cultural constraints and generally greater child-care and family responsibilities compared with men, especially in some of the partner countries. Also there is a risk that local coastal fishing and tourism based communities could be effectively excluded from participating in the design and implementation phases due a number of factors, including distance from key meeting venues (mostly at fisheries and/or tourism agencies headquarters) and lack of financial resources to travel to meetings along with opportunity costs from lost days' fishing, tour operating and lack of experience/voice in effectively communicating concerns and views to Government decisionmakers on fisheries and issues. Mitigation: Special attention will be paid to ensuring that social and cultural barriers do not prevent women (as well as youth and other vulnerable groups) from effectively participating in the project. Targets

		for the involvement of women in the project will be set at the PPG stage and detailed in the Project Document (with gender-specific indicators and targets within the project logframe). The project will focus on promoting participation of women, especially in assessments, trainings and workshops, and pilot projects (there may be opportunities for women-led small business development under Component 3). A project-specific Gender Action Plan (GAP) will be developed during the PPG phase and a gender specialist will be employed as part of the project management team (details to be developed during the PPG stage). Similarly, a Stakeholder Engagement and Partnership Plan will be developed and applied during both the PPG phase and during implementation to facilitate stakeholder participation. In terms of local community participation, GEF resources will be made available for local fisher and tour operator engagement and where physical attendance is not possible, the project will make efforts to establish or strengthen digital communications with representatives of key coastal fishing and tourism-based communities involved in the project.
Other		
Overall Risk Rating	Moderate	All the risk Categories analyzed above indicate a LOW to MODERATE rating.

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

The proposed project aligns with the GEF-8 International Waters Focal Area Objective 1: Accelerate joint action to support Sustainable Blue Economic Development, through the development of policy recommendations for local governments to promote blue-growth initiatives and foster the development of the blue economy thereby advancing sustainable blue economy opportunities in the CLME region. The project will principally address IW 1-1 – Sustaining healthy blue ecosystems, with more inclusive engagement of local users of the marine resources (co-management opportunities). The project will also contribute to the Biodiversity Focal Area through helping to conserve critical marine and coastal ecosystems and the maintenance of ecosystem goods and services that they provide.

SargMarine is also aligned with Priority Area 1 (Supporting the Adaptation Needs of SIDS) which includes adaptation support for improved regional forecasts, systemic resilience interventions in the tourism space, measures to build resilience, early warning systems and disaster risk reduction and climate-resilient tourism and Priority Area 2 (Strengthening Technology Transfer, Innovation and Private Sector Engagement) which includes enabling conditions for private sector action, technology transfer and fostering South-South cooperation and learning. It is aligned with Theme 4: Early Warning and Climate Information Systems and Other Adaptation Themes (addressing urgent priorities including but not limited to climate resilient

infrastructure, sustainable alternative livelihoods, and disaster risk management) of the Strategy. The strategy places an emphasis on adaptation approaches and spatial scales where targeted interventions will strengthen climate resilience of human, natural, and economic systems, thereby contributing to transformational adaptation. For the IW Program, they include focus on: (a) coastal areas and vulnerable regions; (b) ecosystem and nature-based adaptation approaches; (c) vulnerable value chain-based approaches; and (d) enterprise, business, and finance. The proposed project satisfies the eligibility criteria, policies and priorities of the IW Program in that; (a) its consistent with relevant national reports, strategies, policies, plans and legislation; (b) in align with the implementing agency's comparative advantage, role, and relevant programming; (c) it will generate adaptation benefits in line with additional cost reasoning; (d) it will demonstrate cost-effectiveness; (e) it will complement and be coordinated with other relevant initiatives; (f) it will be sustainable, innovative, and promote scaling up; (f) it will identify relevant risks and demonstrate adequate mitigation measures; and (g) adhere to GEF policies on gender mainstreaming and public involvement.

More specifically, the project will contribute to the GEF 8 Result Measure Framework - Core Indicators 5 (5.2), 7 (7.3, 7.4) and 11 (11.1, 11.2), as well as, to the target 2, 6, 11, 19, 20, 21, 22 and 23 of the 2030 target of the Kumming-Montreal Global Biodiversity Framework. Strengthening and complementing the existing governance mechanisms at the regional, national and local level for addressing sargassum influx in the CLME following equity and inclusive principles will contribute to target 22 and 23 of the Global Biodiversity Framework, aiming at the project implementation does not create more social and gender disparities and actions are legitimated. Regarding the more robust and precise forecasting systems and the early warning systems for the influx, the project will ensure that both systems are relevant and accessible to the key audience, in the most socially appropriate language and mechanisms, ensuring that knowledge is available for adaptation measures (target 21). Capacity building and training for the effective use of the forecast and early warning systems, technology transfer to countries, and technical training to promote sargassum-based business, particularly with the population in situations of vulnerability, will contribute to target 20 of the framework. The loans and funding mechanism to incentive sargassum-based business will catalyze the adoption of alternatives to remove sargassum and restore key coastal areas, including Marine Protected Areas (target 19). Beside the reactive beach cleaning funded by the governments, the strategy to catalyze sargassum-based business will contribute to restore key habitat (target 2), reduce the presence of the invasive species, such as sargassum (target 6) and produce benefits to people (target 11).

Alignment with regional priorities

The countries participating in this project are signatories to numerous conventions and agreements at the regional level related to environment and development.

The project will participate in the regional platform of CARICOM's Thematic Group on Climate Change, Disaster Risk Management & Natural Resource Management in which key stakeholders (government and nongovernment) share programmes, and projects and actively seek to build synergies among initiatives. The proposed project will contribute to regional resilience by supporting CARICOM's envisioned 25% reduction in the regional food import bill by 2025.

The annual Caribbean Week of Agriculture also offers opportunities to engage with stakeholders leading on initiatives in the region and to identify areas to work jointly to address regional issues.

The project will support delivery of key priorities the 2015-2025 Strategic Action Programme for the Sustainable Management of the Shared Living Marine Resources of the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ SAP) which aims to improve management of shared living marine resources and address habitat degradation and marine pollution, particularly strategy 5 and 6.

The project will contribute to the 2014 Caribbean Community Common Fisheries Policy (CCCFP) which seeks to expand the data and information used in decision-making and resource management, enabling States and fishers to better protect their interests and manage the resources. The CRFM Strategic Plan (2013-2021) operationalizes the CRFM Agreement and CCCFP through goals and objectives that frame the workplan for the CRFM.

Alignment with national priorities

The project will help participating countries meet their responsibilities and commitments under numerous conventions and associated national strategies. The project directly addresses fisheries and marine conservation policies, plans and programmes supporting the implementation of current initiatives for sustainable use and management of coastal and marine resources as well as socio-economic development.

At the national level, the institutional structures for fisheries management include fisheries and environmental ministerial functions and stakeholder associations. The policy and legal context in support of sustainable fisheries management is covered by a wide variety of instruments, including: parent Acts governing the access, use, and management of biological resources such as Acts covering Fisheries, Wildlife Protection, Protected Areas, Coastal Zone Management, Environmental Protection; regulations dealing with Species Protection, Marine Reserves; policies relating to National Fisheries, National Tourism, Integrated Coastal Zone Management; and planning documents concerned with Fisheries Management, Natural Resources Management, and Integrated Coastal Zone Management. Specifically, the project is consistent and fully in line with the following key national priorities and policies in the four participating countries (some of which are under review and have been delayed during to the Covid pandemic):

- In Colombia, the Colombian Institute of Fisheries and Aquaculture (INVEMAR) and the Ministry of Environment and Sustainable Development are responsible for overseeing fisheries management and enforcing relevant regulations. Colombia's fisheries management legislation is anchored in the Fisheries Code (Law 13 of 1990), which serves as the primary legal framework for regulating fisheries activities and aquaculture practices. Under the Code, The Colombian Institute of Fisheries and Aquaculture (INVEMAR) and the Ministry of Environment and Sustainable Development are responsible for overseeing fisheries management and enforcing relevant regulations. The law is supplemented by decrees, for instance, Decree 2258 of 1986 which establishes rules for conservation and management of marine resources. Law 99 of 1993: While not specifically focused on fisheries, establishes the legal framework for environmental management in Colombia. It includes provisions for the protection of marine and coastal ecosystems, which are relevant to fisheries management.

- In the Dominican Republic, Law 307/2004, serves as the primary legal framework which regulates fisheries activities. The Law’s objective is the sustainable use of fisheries resources and aquaculture based on responsible fisheries and aquaculture. The Ministry of Environment and Natural Resources (MARENA) and the Dominican Institute of Fisheries and Aquaculture (IDIAF) are responsible for overseeing fisheries management and enforcing relevant regulations in the country.

- In Grenada, the Fisheries Act (1986) regulates fishing activities and promotes the sustainable use of marine resources. The National Ocean Governance Policy (2020) further strengthens the protection of marine ecosystems. While not solely focused on sargassum, this policy emphasizes the sustainable use and management of Grenada's marine resources, including addressing environmental challenges such as sargassum influxes. The Ministry of Climate Resilience, the Environment, Forestry, Fisheries, and Disaster Management oversees marine conservation efforts. Finally, the Grenada Solid Waste Management Authority (GSWMA) is the institution that plays a key role in managing the cleanup and disposal of sargassum from beaches and coastal areas.

- In Jamaica, the Fisheries Act (2018) regulates sustainable fishing and marine resource conservation, while the Natural Resources Conservation Authority (NRCA), under the National Environment and Planning Agency (NEPA), oversees environmental protection, including marine ecosystems. Regarding sargassum influx management, NEPA, in collaboration with local and regional bodies, plays a key role in coordinating responses. The Caribbean Regional Fisheries Mechanism (CRFM) and Cartagena Convention's SPAW Protocol support regional strategies for sargassum control and marine biodiversity protection. These frameworks promote a balance between addressing sargassum challenges and ensuring the sustainability of Jamaica's marine resources

- In Panama, the National Aquatic Resources Authority (ARAP) is responsible for overseeing fisheries management and enforcing relevant regulations. Panama has several executive decrees governing fisheries management and conservation. For instance, the Executive Decree No. 60 of 2006 which establishes rules for the conservation and management of marine resources in Panama, including measures to protect marine habitats and biodiversity. Also, Law 44 of 2004 law establishes the legal framework for fisheries and aquaculture activities in Panama providing a basis for regulating fishing activities and management of fish stocks.

- In Saint Lucia, the Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources, and Co-operatives plays a central role in addressing the issue. Environmental laws, such as the Fisheries Act and the Physical Planning and Development Act, promote sustainable management of marine resources and coastal protection. Collaboration between local agencies, international organizations, and NGOs supports sargassum removal and recycling initiatives. Public awareness campaigns educate citizens on the environmental impact, while community engagement projects empower coastal communities to contribute to sargassum management efforts.

- In Trinidad and Tobago, the National Environmental Policy 2018 serves as a framework addressing various environmental concerns, including coastal and marine area management and fisheries management. Within this Policy framework, the establishment of an Integrated Coastal Zone Management Policy was identified as a priority. Recently in August 2023, the Integrated Coastal Zone Management Policy was approved by Cabinet followed by the appointment of a new Integrated Coastal Zone Management Inter-ministerial committee in 2024. The committee will oversee the implementation of a 10-year plan aimed at promoting sustainable economic development leveraging the country's oceans and coasts. The Fisheries Management Bill 2020 is at the Parliamentary review stage. There is a need to develop Regulations and other subsidiary legislation to facilitate implementation of the new Act. Standard Operating Procedures (for inter-agency collaboration and for internal processes) for operationalization of the laws still need to be drafted and implemented. An Integrated Fisheries Management Plan is under development and incorporates and updates all draft management plans including for shrimp trawl and hard substrate resources. An Ecotourism Sub-policy was drafted in 2023 which seeks to provide a framework to facilitate an enabling environment for the sustainable development and management of the ecotourism sector in Trinidad and Tobago. Preservation, protection and conservation of natural resources are key priorities.

Although none of the participating countries has a specific fisheries sector policy covering measures following recovery from the Covid pandemic, each country does focus on the need for economic recovery following the pandemic, and the fisheries sector (and the tourism associated sector in some

cases) is seen as an important sector that can support recovery in these countries and to secure more sustainable food security. For instance, the 'Roadmap for Trinidad and Tobago Post COVID-19 Pandemic' identifies the Agriculture Sector (which includes fisheries) as an essential service and adopts "policy positions to immediately and aggressively boost the agriculture sector and launch (TT)$500 million Stimulus Programme for the Sector" in order to make Trinidad and Tobago a more food secure nation by "reducing the country's dependence on specific imported foods, increasing productive capacity and accessibility to domestic produce". Consequently, the SargMarine project will help to support national post-Covid recovery efforts.

The participating countries are all signatories of the UNCBD and have developed National Biodiversity Strategies and Action Plans (NBSAP), all of which contain specific references to the government commitment to sustainable use of coastal and marine resources. The project is in line with these NBSAPs, each of which outlines fisheries and marine conservation as a high priority.

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities: Yes

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and will develop a Stakeholder Engagement Plan during PPG ph It must be noted that several of the above Outcomes, both within and between components, interlink and work together or are dependent on the progress and results of others (as depicted by the network of arrows in Figure 5, the graphical representation of the ToC). Note that arrows in the graphic indicate a connection (linkage, relationship) between project components, and the direction of arrows indicates how an element leads to, or contributes to, one or more others (which may illustrate how one element may be dependent on another being achieved). So, for instance, the arrows can indicate how direct results of the project (outputs) can combine to

produce wider changes (immediate project outcomes) which themselves may contribute to longer-term changes (mid-term and long-term changes in behavior, systems and states). Arrows that point both left and right indicate a two-way flow of results from one component to another. For example, information from components 1-3 feeds the development of deliverables under Component 4.

The causal flow of results in the ToC (from output to project outcome to wider, longer-term changes in state) also depends on a series of assumptions and drivers (indicated in the graphic) that may influence the linkage (relationship) between the elements of the ToC. Achievement of the immediate project components and outcomes above will contribute to wider changes and impacts over the longer term as set out in the Theory of Change graphic above.

In addition, the achievement of the project outcomes and progress towards the project objective and longer-term impacts depends on a number of wider assumptions being met. Assumptions that directly relate to the achievement of the project's immediate outcomes are:

A1: Social and cultural barriers do not prevent women, youth and marginalized groups from effectively participating in integrated management of sargassum influxes.

A2: The private sector is willing (or can be encouraged) to invest in activities to new sargassum business opportunities and to provide a supportive environment for integrated sargassum management.

In addition, operation of the project itself rests on several preconditions, including that: (i) the project can secure the external expertise and technical assistance required for a full and timely implementation of project activities (needed for delivery of all Components, but especially Components 1-3); (ii) there is continued commitment of the participating institutions and actors from national to community level during the project lifetime, manifest through their continued staff involvement and co-financing contributions; (iii) there are no major political changes in participating countries that would prevent the project's institutional framework from continuing to operate and deliver project results inter alia.

Conversely, there are several impact drivers that may make progress towards the achievement of project outcomes more likely, notably:

D1: Increased awareness among government decision and policy makers about their role in the integrated management of sargassum, sargassum biobusiness and other opportunities offered by the use of sargassum in blue growth and blue economy development simultaneously conserving critical marine and coastal ecosystems from influxes.

D2: The fishing and tourism industries are keen to engage in new business ventures related to sargassum biobusiness.

If the project outcome-level assumptions and impact drivers (A1-2 and D1-2) are met, then delivery of the four project Components will result in further gains along the causal pathway.

ii. Areas to be targeted by the project

An informal technical advisory group/committee, composed of focal points and experts from all the participating project countries would be established during the PPG phase. Using agreed selection criteria, this group/committee will assist in the identification of target areas under the project during the PPG Phase.

iii. Global environmental benefits which would not have accrued without the GEF project

Given that the impacts of sargassum influxes are experienced and shared among the CLME countries, a GEF investment in developing a regional integrated approach to the management of sargassum, including capacity and institutional building, data coordination and joint public-private frameworks, will lead to substantial improvement in marine ecosystem health and resilience and socio-economic well-being in the CLME region. One of the first steps in ecosystem resilience planning is conducting vulnerability and exposure assessments. Too often interventions are made without up-to-date data to support appropriate strategies and interventions, resulting in inefficient allocation of resources and further harm to coastal ecosystems. This GEF Project aims to provide a foundation for proactive management and decision-making through country-driven sargassum influx exposure and vulnerability assessments that incorporate a regional approach. These assessments will provide decision makers with detailed information on ecosystems that are most vulnerable to sargassum influxes. Moreover, they can inform sustainable resource use practices by identifying areas that are most vulnerable to negative impacts.

This GEF Project will also enhance regionally based forecasting products, which in combination with exposure and vulnerability assessments can facilitate the development of strategies to protect these habitats and ensure their continued ability to provide ecosystem services (i.e., inform ecosystem restoration and conservation efforts). With this knowledge, activities such as fishing, recreational activities, and development can be guided, to limit disruption or harm to ecosystem services. To further mitigate the negative impacts to coastal ecosystems, this GEF Project explores opportunities for sargassum biobusinesses to reduce the risk of smothering these habitats, thus preserving their ecological function and biodiversity. Not only does converting sargassum biobusiness promote a circular economy but some products, such as biofuel, can contribute to global climate change mitigation by providing alternative energy sources and reducing reliance on fossil fuels.

The business-as-usual scenario, will continue to be governed by fractured country-specific reactive responses that fail to capture the economies of scale of regional cooperation in the CLME to address accordingly this challenging phenomenon. Decision-making and response planning to sargassum influxes will continue to be limited by myopic forecasting models and early warning systems that are not specifically tailored to tourism and fisheries sectors nor have a regional scope; a weak/ineffective enabling environment will exist for decision-making, action and social protection to support the promotion of sargassum biobusiness with

contradicting regulations that hinder the income generating opportunities of its management through a Blue Economy approach; and information available on measures and mechanisms to support regional integrated sargassum management will continue to be limited and fragmented across platforms.

On the other hand, if a GEF intervention is designed to promote the Integrated Management and Regional Governance of Sargassum in a joint collaborative effort among CLME countries, the above limitations may be overcome to address related challenges. Regional innovation will cover capacity building, institutional and regulatory strengthening and knowledge management mechanisms to promote coordination and synergies among participants. Their aim will be to attain a whole-CLME scope that will ensure on-going initiatives (especially other GEF IW projects) are acknowledged and effective coordination mechanisms implemented. Also, the promotion of biobusinesses through a regional fund, the Sargassum Biobusiness Investment Fund (SBIF) will have a leverage effect to promote sustainable income generation throughout the CLME while attracting private investment to tackle the referred problem. Furthermore, lessons learned and best practices from the project will serve to other regional ocean-wide efforts and coordination mechanisms urgently needed to tackle climate change related problems.

iv. Stakeholders and their respective roles, contributions, and benefits

Effective management of sargassum influxes requires a concerted effort involving a multitude of stakeholders from government agencies, private sector, civil society, and community groups. Government agencies, particularly the fisheries and tourism departments, play pivotal roles in the effective management of sargassum influxes, given their direct engagement with sectors profoundly affected by these events. They are responsible for data collection, providing insights into potential mitigation measures, contributing to monitoring efforts, policy development, regulation enforcement, and coordinating responses to sargassum events. Involvement in this GEF Project offers fisheries and tourism agencies a range of benefits that contribute to environmental protection, economic sustainability, and public well-being. Some of these include access to tools and capacity building for improved sargassum research and monitoring, increased institutional capacity to respond to sargassum influxes, biodiversity conservation, advanced climate change adaptation and ecosystem-based adaptation agendas and strengthened public-private partnerships.

The private sector plays a vital role in sargassum management through its capacity to innovate, provide resources, and contribute to solutions that address the impacts of sargassum influxes. The project will develop strong partnerships with the private sector, especially those with responsibility for enterprise development and entrepreneurship. The private sector will be key actors in activities which relate to sargassum biobusiness and market development. Relevant stakeholders will be engaged to identify options for financial incentives that will facilitate buy-in and scaling up of sargassum businesses. They will also be supporting capacity building and training programmes. Additionally, researchers at national institutes conducting research (e.g., oceanography, fisheries, tourism, and product development) will contribute to the development of forecasting models, guiding the development of sustainable management strategies and implementing proactive measures. The private sector can position itself to take advantage of these potential benefits in the context of the project, including enhanced corporate social responsibility; enhanced collaboration and partnership, innovation and technological advancements; economic diversification and long-term environmental stewardship.

Equally key stakeholders are the artisanal fishers and tourism operators on the frontlines of sargassum impacts (along with their associated fishing and tourism communities) and who would also be most directly affected by any new national or regional level sargassum response/management measures closed areas/seasons. These key actors have a direct interest in maintaining clean and attractive beaches and protecting fishing grounds. They will be responsible for providing local knowledge on impacts on coastal and marine resources, implementing mitigative actions and cooperating with authorities for efficient responses. Key benefits of the project to fisherfolk and tourism operators include provision of timely information and alerts on impending influxes to facilitate precautionary action, greater knowledge of effective mitigation measures, support in resilience building, access to resources and training, diversification of income streams and participation in decision-making.

Given the transboundary nature of these events, the engagement of international stakeholders brings forth collaborative solutions that transcend borders and amplify the effectiveness of management strategies. The project will involve a wider group of international strategic partners (e.g., NOAA, IOC UNESCO, GEO Blue Planet, UNEP, UNDP Accelerator Lab) to provide expertise, technical support and best practices sharing especially as it relates to improving forecasting products and promoting blue initiatives. Involvement in this GEF Project can derive the following benefits to international partners: demonstration of global environmental stewardship by assisting regions impacted by sargassum events, enhanced reputation as global leaders in sustainable environmental management, increased knowledge exchange and learning, global networking and advancing global climate change adaptation, disaster risk reduction and management, social protection, nature-based solutions (NbS) and ecosystem-based adaptation agendas.

v. Strengthening and alignment with existing national policies (policy coherence)

The SargMarine project is based on the key recommendations and identified gaps of the 2021 update of the UNEP-CEP Sargassum White Paper, the Cartagena Convention and its Specially Protected Areas and Wildlife (SPAW). It also builds on the key outcomes and lessons learnt from previous projects such as the CLME and CLME+ projects.

The project will articulate with the PROCARIBE+ and other future relevant projects to provide the resources needed to implement and sustain the general recommendations articulated in the paper including:

- Increasing the collaboration and joint programming between the Specially Protected Areas and Wildlife (SPAW) Protocol to the Cartagena Convention, particularly in the context of the SPAW Sargassum Working Group.

- Developing further cooperation with relevant organisations and initiatives in order to minimize duplication and enhance SPAW programme delivery.

- Collaborating with the Abidjan Convention (West Africa) and others such as the GEO- BluePlanet (Sargassum Information Hub) and Florida International University (SargNet) with the objective of consolidating a common platform for Sargassum management in the Wider Caribbean and West Africa.

The project supports participating countries in their efforts in achieving several of the:

UN Sustainable Development Goals:

- Goal 5: Gender Equality through the promotion of equal ease of access to resources and opportunities regardless of gender in all sargassum-related activities.
- Goal 7: Affordable and Clean Energy through the contribution sargassum biobusiness can play in energy security.
- Goal 8: Decent Work and Economic Growth through the diversification and growth of sargassum-based economic sectors.
- Goal 9: Industry, Innovation and Infrastructure through exploring the feasibility of developing sargassum industries as a means of alleviating influx impacts.
- Goal 13: Climate Action through the implicit link between the oceans and climate change, and the adaptive measures countries can take to maintain ocean integrity and resilience to sargassum influxes.
- Goal 14: Life Below Water through identifying risks to the marine environment including sargassum influxes, especially to marine living resources, and proposing strategies that mitigate those risks.
- Goal 16: Strong Institutions through establishing robust governance mechanisms and incorporating participatory processes in decision-making about marine management issues; and
- Goal 17: Partnerships for the Goals through promoting collaboration of regional partners working at the science-policy interface as it relates to sargassum influx management and governance.

2030 target of the Kunming-Montreal Global Biodiversity Framework:

- Target 2: Restore 30% of all degraded ecosystems
- Target 6: Reduce the introduction of invasive alien species by 50% and minimize their impact
- Target 11: Restore, maintain and enhance nature’s contributions to people
- Target 19: Mobilize $200 billion per year for biodiversity from all sources, including $30 billion through international finance.
- Target 20: Strengthen capacity-building, technology transfer, and scientific and technical cooperation for biodiversity
- Target 21: Ensure that knowledge is available and accessible to guide conservation actions.
- Target 22: Ensure participation in decision-making and access to justice and information related to biodiversity for all.
- Target 23: Ensure gender equality and a gender-responsive approach for biodiversity action.

SPAW-RAC Strategic Plan 2023-2028

- Strategic objetive 1.2.1: Develop the mission of scientific and technical assistance to the Parties.
- Strategic objetive 1.2.2: Strengthen regional cooperation.
- Strategic objective 2.2.1: Strengthen the visibility of the Protocol Increase the visibility of the SPAW-RAC, so that it is easily identifiable and accessible to the target audience(s).

The Strategic Action Programme for the Sustainable Management of the Shared Living Marine Resources of the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ SAP)

- Strategy 1: Enhance the regional governance arrangements for the protection of the marine environment.
- Strategy 3: Establish and operationalize a regional policy coordination mechanism for ocean governance with initial focus on shared Living Marine Resources

vi. Knowledge generation, management and exchange

A vast and growing amount of communication materials outline the existing knowledge of sargassum biology, monitoring tools and forecasting systems. Since 2021, the Sargassum HUB has centralized most of that information and made it available to policy makers, researchers, business owners, coastal communities and general audiences.

Despite such efforts, the information available on measures and mechanisms to support integrated sargassum management remains quite limited. For instance, IW:LEARN showcases a limited number of projects addressing sargassum influxes worldwide. Nonetheless, within the IW:LEARN framework, the project will promote the scaling up of lessons learned and best practices generated by the Common Oceans Programme, which is funded by the GEF, to the project beneficiary countries. In this regard, in coordination with IW:LEARN, the project will encourage the enhancement of knowledge among policymakers from the governments, executing agencies, and identified partners through stakeholder analysis and the stakeholder engagement strategy. In sum, this project will promote direct (training, learning exchange, etc.) or indirect (through knowledge platform) effective sharing of lessons learning, knowledge resources, good practice guides, among others. Learning exchanges between countries and current and future related projects (CARIBE+, and other) within and beyond the project area may increase the awareness of stakeholders and inspire action.

The project will produce considerable knowledge and resources across all its components, which will be integrated and disseminated mainly through the project´s communication and education plan of Component 4

and Component´s 2 specific strategy for sargassum forecasting initiatives and early warning systems. Overall, knowledge management will be address through Component 4. This component will focus on widening our existing knowledge about sargassum influxes as well as integrated management, with the aiming at raising awareness, promoting learning and continuous improvement (linked to project M&E activities), generating content for up-scaling of project achievements, lessons, and good practices, enable institutional memory, and supporting stakeholder engagement on key issues related to integrated management of sargassum in the CLME. The project will support capacity building and training actions under all the components. Online/virtual training and information exchange are expected to play a significant role in the project's KM approach and will be supported through IW:LEARN as relevant and the creation of a dedicated digital project KM platform (part of the project website). The project will also host in-person fora, meetings, workshops, as well as maintaining informal communication with key stakeholders through a project listserv and other means (e.g., Facebook group, WhatsApp group). Project results, experiences, lessons learned and recommendations for successful implementation of effective, integrated sargassum management measures in the CLME will be produced and disseminated via relevant national, regional, and global platforms, including existing CAF, Sargassum Hub, IW:LEARN,and project partner websites. A broader dissemination of experience and lessons learnt generated by the project will be pursued through engaging national and regional technical and educational institutions, and regionally and internationally through South-South cooperation mechanisms. Additionally, this component will develop a comprehensive systematization of good regional practices and lessons learned related to sargassum management. To effectively account for the approach to gender and community issues, systematizations will include an analysis of how these topics have been addressed in the context of OAS and GEF gender mainstreaming initiatives.

vii. Transformational and innovative nature of the project and scaling up

Innovation/transformation: Sargassum influxes have been a catalyst for innovation and have the potential to form part of a sustainable and equitable blue recovery to the COVID-19 crisis. Shifting the sargassum influx paradigm from hazard to opportunity is the best-case scenario for reducing vulnerability and increasing resilience to this new phenomenon. Merging opportunity and adaptation may offer SIDS and developing countries potential solutions that are both independent of fraught global efforts on climate change mitigation and directly beneficial to their vulnerable economies. This paradigm shift requires not just developing technologies, capacities, and safeguards and creating the appropriate enabling environment on a national basis. A regional approach is needed to overcome myopic interventions that fail to understand the transboundary nature of this phenomenon. Strengthening the regional governance for the integrated management of sargassum is a necessary condition to reduce its impacts on marine ecosystems, communities' livelihoods and local industries.

Scaling up of project results and successes will be achieved through the project's Knowledge Management activities under Component 4. The feasibility assessment of Component 2 seeks to make a determination in order to inform decision making and policy. This project aims to support this paradigm shift, if feasible, by promoting synergies between existing initiatives and fostering collaboration. Beyond the project's lifetime, GS/OAS and CAF Secretariat will continue to collaborate with implementing partners to establish sustainable financing mechanisms to support project initiatives. Key achievements of the project will be promoted and

mainstreamed into existing institutional arrangements. Member states will be encouraged to get buy-in from policy makers to sustain initiatives. The participatory monitoring and evaluation framework established from the project inception will be used to track progress after the project is implemented to determine its impact and potential for scaling up and replicating in other impacted regions.ase before CEO endorsement has been clearly articulated in the Project Description (Section B).

Between June 2023 and September 2024, a series of official communications, virtual and in-presence bilateral meetings were held among CAF, IAI, SGS/OAS and the government institutions from Panama, Dominican Republic, Colombia, Grenada, Trinidad and Tobago, Jamaica, and Saint Lucia to: (i) inform them of the project, (ii) ensure the project´s alignment with the relevant country specific initiatives and priorities and (iii) obtain official endorsement from those countries to participate in the execution of the project. The dates, subjects and participants of the meetings are described in the table below:

Date	Participants	Topics covered/discussed
COLOMBIA		
August 5, 2023	1. Arne Britton, Director of the Corporation for the Sustainable Development of the Archipelago of San Andrés, Providencia, and Santa Catalina, CORALINA. 2. Director of the Chamber of Commerce of San Andrés and Providencia. 3. Erick Castro, Principal Executive, Green Business Unit, CAF.	Discussion of the project´s relevance for the Archipelago´s ecosystems and tourism sector.
September 17, 2023	1. Maria Teresa Becerra, GEF operational focal point. 2. Camila Gomez, Advisor, Ministry of Environment and Sustainable Development. 3. Erick Castro, Principal Executive, Green Business Unit, CAF.	Further discussion on alignment to national policies.
July 29, 2024	1. Maria Teresa Becerra, GEF operational focal point. 2. Erick Castro, Principal. Executive, Green Business Unit, CAF. 3. Andres Sánchez, Principal Specialist and Manager of the Americas Water Program from de GS/OAS.	Official communication via email requesting a first update on the endorsement letter.
October 16, 2024	1. Maria Teresa Becerra, GEF operational focal point. 2. Erick Castro, Principal Executive, Green Business Unit, CAF. 3. Andres Sánchez, Principal Specialist and Manager of the Americas Water Program from de GS/OAS.	Official communication via email requesting a second update on the endorsement letter, confirming that the GS/OAS will be the executing agency.
DOMINICAN REPUBLIC		
February 21, 2024	1. Shelly-Ann Cox, Sargassum Expert and Project Lead and representative of the IAI Technical Team.	Discussion of the project´s overall approach, policy relevance and importance for tourism and fisheries.

Date	Participants	Topics covered/discussed
	2. Kerton Jobe, GEF Expert and representative of the IAI Technical Team. 3. Richéda Speede, Sargassum Expert and representative of the IAI Technical Team. 4. Matias Mastrangelo, IAI STeP Fellow and Conservation Biologist. 5. Mauricio Velasquez, Principal Executive, Green Business Unit, CAF. 6. David Smith, Director of the Centre for Environmental Management, UWI, Mona. 7. Mercy Borbor, Scientific Advisory Committee Member, IAI. 8. Ivan Marcell Cruz Burgos, Country Stakeholder. 9. Solhanlle Ernestina Bonilla Duarte, Country Stakeholder. 10. Soledad Noya, Country Stakeholder. 11. Melisa Guzman- Country Stakeholder. 12. Daniella Perez, Country Stakeholder. 13. Lourdes Martino, Country Stakeholder	
March 11, 2024	1. Ivan Cruz, GEF operational focal point. 2. Milagros de Camps, Deputy Minister of Climate Change and Sustainability - Ministry of Environment and Natural Resources. 3. Erick Castro, Principal Executive, Green Business Unit, CAF.	Further discussion on alignment to national policies and initiatives underway.
July 29, 2024	1. Ivan Cruz, GEF operational focal point. 2. Erick Castro, Principal Executive, Green Business Unit, CAF. 3. Andres Sánchez, Principal Specialist and Manager of the Americas Water Program from de GS/OAS.	Official communication via email requesting a first update on the endorsement letter.
October 16, 2024	1. Ivan Cruz, GEF operational focal point. 2. Erick Castro, Principal Executive, Green Business Unit, CAF. 3. Andres Sánchez, Principal Specialist and Manager of the Americas Water Program from de GS/OAS.	Official communication via email requesting a second update on the endorsement letter, confirming that the GS/OAS will be the executing agency.
GRENADA		

Date	Participants	Topics covered/discussed
August 29, 2024	1. Ms. Nicole M. Clarke-Gurley, GEF operational focal point, Permanent Secretary (Ag.). Ministry of Mobilization, Implementation and Transformation. 2. Ms. Isabel Morris, Ministry of Mobilization, Implementation and Transformation. 3. Mr. Mark Lambrides, Director of The Department of Sustainable Development of GS/OAS. 4. Mr. Andrés Sánchez Peña, Senior Specialist and Officer on Charge of Americas Water Program of the Department of Sustainable Development of GS/OAS.	Following the official communication sent by the GS/OAS, a dialogue process was requested to present the PIF and obtain its endorsement, provided that it met the country's requirements.
September 4, 2024	1. Ms. Nicole M. Clarke-Gurley, GEF operational focal point, Permanent Secretary (Ag.). Ministry of Mobilization, Implementation and Transformation. 2. Ms. Isabel Morris, Ministry of Mobilization, Implementation and Transformation. 3. Mr. Mark Lambrides, Director of The Department of Sustainable Development of GS/OAS. 4. Mr. Andrés Sánchez Peña, Senior Specialist and Officer on Charge of Americas Water Program of the Department of Sustainable Development of GS/OAS.	The GEF Operational Focal Point, Ms. Nicole M. Clarke-Gurley, requested a meeting to discuss key points of PIF in response to the communication sent to her on August 29, which included the PIF as an attachment. In this context, it was agreed to hold a technical meeting on September 5.
September 5, 2024	1. Ms. Nicole M. Clarke-Gurley, GEF operational focal point, Permanent Secretary (Ag.). Ministry of Mobilization, Implementation and Transformation. 2. Ms. Isabel Morris, Ministry of Mobilization, Implementation and Transformation. 3. Mr. Mark Lambrides, Director of The Department of Sustainable Development of GS/OAS. 4. Mr. Andrés Sánchez Peña, Senior Specialist and Officer on Charge of Americas Water Program of the Department of Sustainable Development of GS/OAS. 5. Ms. Delfina Iervolino, Consultant of The Americas Water Program. 6. Mr. Mauricio Cerna, Consultant of The Americas Water Program.	In the meeting key points of the PIF were presented, and it was agreed to share it to receive technical input. In this context, it was requested that, if approved, the endorsement letter required by the GEF be sent.
September 23, 2024	1. Ms. Nicole M. Clarke-Gurley, GEF operational focal point, Permanent Secretary (Ag.).	Through an official communication sent on behalf of the GEF Operational Focal Point, the endorsement letter was

Date	Participants	Topics covered/discussed
	Ministry of Mobilization, Implementation and Transformation. 2. Ms. Isabel Morris, Ministry of Mobilization, Implementation and Transformation. 3. Mr. Mark Lambrides, Director of The Department of Sustainable Development of GS/OAS. 4. Mr. Andrés Sánchez Peña, Senior Specialist and Officer on Charge of Americas Water Program of the Department of Sustainable Development of GS/OAS.	sent. Additionally, it was requested that recommendations, which were submitted in writing, be incorporated during the PPG.
JAMAICA		
February 22, 2024	1. Alicia Montalvo, Climate Action and Positive Biodiversity Manager, CAF. 2. Erick Castro, Principal Executive, Green Business Unit, CAF. 3. Mauricio Velasquez, Principal Executive, Green Business Unit, CAF. 4. Monique Curtis, Manager – Ecosystems Management Branch. National Environment and Planning Agency 5. Joni Jackson, Director Natural Resources Ministry of Economic Growth and Job Creation. 6. Ms. Gillian Guthrie, Operational GEF Focal Point and Senior Director, Ministry of Water, Land, Environment and Climate Change	The exchange of communications initiated by CAF included the sending of the PIF for review and endorsement of the proposal. The National Environment and Planning Agency expressed its support for the PIF, indicating agreement with the components and activities.
August 23, 2024	1. Ignacio Lorenzo, Director of Biodiversity and Climate Technical Advisory, CAF. 2. Alicia Montalvo, Climate Action and Positive Biodiversity Manager, CAF. 3. Erick Castro, Principal Executive, Green Business Unit, CAF 4. Stacy Richards-Kennedy, Regional Manager for the Caribbean, CAF. 5. Anna Stewart, Executive Director of the Inter-American Institute for Global Change Research. 6. Monique Curtis, Manager – Ecosystems Management Branch. National Environment and Planning Agency 7. Joni Jackson, Director Natural Resources Ministry of Economic Growth and Job Creation.	The GS/OAS followed up on the communication initiated by CAF through a verbal note sent to Ms. Guthrie. Following an exchange of emails, a meeting was scheduled for September 5 to present the PIF.

Date	Participants	Topics covered/discussed
	8. Ms. Gillian Guthrie, Operational GEF Focal Point. Ministry of Economic Growth and Job Creation 9. Mr. Mark Lambrides, Director of The Department of Sustainable Development of GS/OAS 10. Mr. Andrés Sánchez Peña, Senior Specialist and Officer on Charge of Americas Water Program of the Department of Sustainable Development of GS/OAS.	
September 5, 2024	1. Ms. Monique Curtis, Manager – Ecosystems Management Branch. National Environment and Planning Agency. 2. Ms. Gillian Guthrie, Operational GEF Focal Point. Ministry of Economic Growth and Job Creation. 3. Mr. Mark Lambrides, Director of The Department of Sustainable Development of GS/OAS 4. Mr. Andrés Sánchez Peña, Senior Specialist and Officer on Charge of Americas Water Program of the Department of Sustainable Development of GS/OAS. 5. Ms. Delfina Iervolino, Consultant of The Americas Water Program. 6. Mr. Mauricio Cerna, Consultant of The Americas Water Program.	The meeting allowed for the presentation of key aspects of the PIF and agreed to send the updated version, which included adjustments made in response to comments from the GEF. It was agreed that the document would be sent for technical review, and if approved, the endorsement letter would be sent.
PANAMA		
February 29, 2024	1. Digna Barsallo, Director of Seas and Coasts, Ministry of Environment. 2. Erick Castro, Principal Executive, Green Business Unit, CAF	Discussion of the project´s policy relevance and PIF´s contents.
July 29, 2024	1. Erick Castro, Principal Executive, Green Business Unit, CAF. 2. Andres Sánchez, Principal Specialist and Manager of the Americas Water Program from de GS/OAS. 3. Raúl Pinedo, Analista de Asuntos Económicos Punto Focal Operativo GEF-Panamá.	Official communication via email requesting a first update on the endorsement letter.
October 16, 2024	1. Erick Castro, Principal Executive, Green Business Unit, CAF. 2. Andres Sánchez, Principal Specialist and Manager of the Americas Water Program from de GS/OAS.	Official communication via email requesting a second update on the endorsement letter, confirming that the GS/OAS will be the executing agency.

Date	Participants	Topics covered/discussed
	3. Raúl Pinedo, Analista de Asuntos Económicos Punto Focal Operativo GEF-Panamá.	
	SAINT LUCIA	
August 27, 2024	1. Mr. Eulampius Frederick. Chief Technical Officer (Ag.) / GEF Operational Focal Point (Saint Lucia). Policy and Planning Division. Department of Sustainable Development Ministry of Education, Innovation, Science, Technology, Sustainable Development and Vocational Training. 2. Ms. Shirnaya Stephen, Minister Counselor, Alternate Representative of the Permanent Mission of Grenada to the Organization of American States. 3. Ms. Dalia Clement, First Secretary, Alternate Representative of the Permanent Mission of Grenada to the Organization of American States. 4. Mr. Mark Lambrides, Director of The Department of Sustainable Development of GS/OAS. 5. Mr. Andrés Sánchez Peña, Senior Specialist and Officer on Charge of Americas Water Program of the Department of Sustainable Development of GS/OAS. 6. Charlene Solozano, Program Lead, Disaster Risk Management Department of Sustainable Development of GS/OAS.	Through an official communication sent by the GS/OAS, contact was initiated with the Ministry of Education, Innovation, Science, Technology, Sustainable Development and Vocational Training, requesting a review of the PIF, as well as its endorsement, should the technical area of Saint Lucia consider the project viable.
Septembre 5, 2024	1. Mr. Eulampius Frederick. Chief Technical Officer (Ag.) / GEF Operational Focal Point (Saint Lucia). Policy and Planning Division. Department of Sustainable Development Ministry of Education, Innovation, Science, Technology, Sustainable Development and Vocational Training. 2. Ms. Shirnaya Stephen, Minister Counselor, Alternate Representative of the Permanent Mission of Grenada to the Organization of American States. 3. Ms. Dalia Clement, First Secretary, Alternate Representative of the Permanent Mission of Grenada to the Organization of American States. 4. Mr. Mark Lambrides, Director of The Department of Sustainable Development of GS/OAS.	Through an official communication sent by Mr. Eulampius Frederick, GEF Operational Focal Point, the letter of endorsement for the project was sent without any observations being raised.

Date	Participants	Topics covered/discussed
	5. Mr. Andrés Sánchez Peña, Senior Specialist and Officer on Charge of Americas Water Program of the Department of Sustainable Development of GS/OAS. 6. Charlene Solozano, Program Lead, Disaster Risk Management Department of Sustainable Development of GS/OAS.	
Trinidad and Tobago		
February 21, 2024	1. Requena Bernardo, CAF country Representative. 2. Mauricio Velásquez, Principal Executive, Green Business Unit, CAF. 3. Ledesma Stephanie, Principal Executive, CAF, Trinidad and Tobago. 4. Marie Hinds, Deputy Permanent Secretary (Ag), Ministry of Planning and Development 5. Hayden Romano, Managing Director, Environmental Management Authority. 6. Dr. Ava Maxam, Director. Institute of Marine Affairs (IMA), Trinidad & Tobago. 7. David Persaud, Director of the Environmental Policy Planning Division.	Project was presented and discussed to include country´s priorities and perspective.
July 29, 2024	1. Erick Castro, Principal Executive, Green Business Unit, CAF. 2. Andres Sánchez, Principal Specialist and Manager of the Americas Water Program from de GS/OAS. 3. Raúl Pinedo, Analista de Asuntos Económicos Punto Focal Operativo GEF-Panamá.	Official communication via email requesting a first update on the endorsement letter.
October 16, 2024	1. Erick Castro, Principal Executive, Green Business Unit, CAF. 2. Andres Sánchez, Principal Specialist and Manager of the Americas Water Program from de GS/OAS. 3. Raúl Pinedo, Analista de Asuntos Económicos Punto Focal Operativo GEF-Panamá.	Official communication via email requesting a second update on the endorsement letter, confirming that the GS/OAS will be the executing agency.

Besides the above referred countries, GS/OAS and CAF have also held meetings with Mexico and Antigua and Barbuda. These countries have expressed their interest in participating in the project so further approaches will be made towards their endorsement during the PPG phase. To highlight, during the recent IWC-10 meeting at Punta del Este Uruguay, GS/OAS and the National Commission for the Knowledge and Use of Biodiversity (CONABIO) from Mexico discussed about the benefits of joining efforts towards ensuring a

regional scope of the latter´s information system, which provides insights into the volume of sargassum and its displacement routes throughout the CLME.

During the PPG, a socio-economic and gender expert will be hired to expand consultations of local communities and CSO as early as possible. Likewise, government institutions will participate in the design of project preparation activities and local stakeholders will be consulted at the intervention sites. A Comprehensive Stakeholder Engagement Plan will be developed in cooperation with these stakeholders to define and ensure their participation in the full project design as well as implementation.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Low			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

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

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant($)	Agency Fee($)	Total GEF Financing ($)
CAF	GET	Regional	International Waters	International Waters: IW-1	Grant	10,000,000.00	900,000.00	10,900,000.00
Total GEF Resources ($)						**10,000,000.00**	**900,000.00**	**10,900,000.00**

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount ($)

300000

PPG Agency Fee ($)

27000

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG($)	Agency Fee($)	Total PPG Funding($)
CAF	GET	Regional	International Waters	International Waters: IW-1	Grant	300,000.00	27,000.00	327,000.00
Total PPG Amount ($)						**300,000.00**	**27,000.00**	**327,000.00**

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total($)
Total GEF Resources					**0.00**

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing($)	Co-financing($)
IW-1-1	GET	10,000,000.00	76300000

Total Project Cost		**10,000,000.00**	**76,300,000.00**

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
GEF Agency	CAF-Development Bank of Latin America and the Caribbean	Loans	Investment mobilized	18500000
Donor Agency	OAS - Organization of American States	In-kind	Recurrent expenditures	2000000
Donor Agency	IAI- American Institute for Global Change Research	In-kind	Recurrent expenditures	1000000
Recipient Country Government	Govt. of Colombia	In-kind	Recurrent expenditures	8000000
Recipient Country Government	Govt. of Dominican Republic	In-kind	Recurrent expenditures	8000000
Recipient Country Government	Govt. of Jamaica	In-kind	Recurrent expenditures	6000000
Recipient Country Government	Govt. of Panama	In-kind	Recurrent expenditures	8000000
Private Sector	Private sector fisheries and tourism operators and companies	Other	Investment mobilized	2000000
Recipient Country Government	Govt. of Santa Lucia	In-kind	Recurrent expenditures	3500000
Recipient Country Government	Govt. of Trinidad & Tobago	In-kind	Recurrent expenditures	6000000
Others	Regional Fisheries Bodies	In-kind	Recurrent expenditures	1500000
Civil Society Organization	A variety of NGOs will be involved in project activities, mostly local or national e.g., Future Fishers, Trinidad and Tobago, Nature Seekers, The Centre for Livelihoods, Ecosystems, Energy,	In-kind	Recurrent expenditures	1000000

	Adaptation and Resilience in the Caribbean Ltd (CLEAR Caribbean), Caribbean Natural Resources Institute (CANARI), President Mayreau, Conservation International (CI), World Wide Fund for Nature (WWF			
Civil Society Organization	The University of the West Indies (Centre for Resource Management and Environmental Studies (UWI-CERMES); Faculty of Food and Agriculture), University of Trinidad and Tobago, University of the Andes Colombia, University of Panama, Santo Domingo Institute of Technology (Dominican Republic)	In-kind	Recurrent expenditures	1000000
Others	Private sector fisheries and tourism operators and companies	Other	Investment mobilized	1500000
Others	Private sector sargassum biobusinesses	Other	Investment mobilized	3800000
Beneficiaries	Caribbean Network for Fisherfolk Organizations (CNFO), Trinidad and Tobago Unified Fisherfolk (TTUF), National Association of Artisanal Fishermen of Colombia, Fishermen's Cooperatives in Colombia, National Fishermen's Association of the Dominican Republic, National Fisheries Association of Panama	In-kind	Recurrent expenditures	1000000
Recipient Country Government	Govt. of Grenada	In-kind	Recurrent expenditures	3500000
Total Co-financing				**76,300,000.00**

Describe how any "Investment Mobilized" was identified

The co-financing indicated above reflects the six partner governments' initial commitment to programs that will implement key technical actions, finance investments, and support the implementation of this IW project and generate synergies with other related on-going initiatives described above. Non-GEF investments which can contribute to this project's objectives were classified as "investment mobilized". The investment mobilized will come from loans from CAF as part of the fundraising strategy of the SBIF, private sector sargassum biobusinesses co-financing and key stakeholders from the tourism and fisheries sectors.

OAS will coordinate the implementation of the action as project executor. Likewise, it will lead together with recipient countries the relationship, management, development of alliances and agreements, and political/technical coordination at the regional level of the proposal.

The Inter-American Institute for Global Change Research (IAI) will be a Lead Technical Agency across the project´s components, with emphasis on Components 1, 2 and 4 due to its extensive experience in applied research on oceans, biodiversity, ecosystems, biodiversity and water resources. Since its establishment 32 years ago, the IAI has been instrumental in advancing scientific capacity in research across the Americas, fostering collaborations both between the North and the South and among Southern peers. With its recent relocation to Panama, the IAI is strengthening collaborative efforts in the Caribbean and Central America, addressing emerging issues such as the proliferation of Sargassum. By leveraging its expertise and strategic approach, the IAI aims to integrate diverse perspectives and research capabilities, ensuring that its scientific endeavors are comprehensive and result in significant impacts.

Project co-financing will be detailed thoroughly and confirmed during full project preparation, and the respective letters will be submitted to GEF Secretariat at CEO Endorsement. Cofinancing of the SBIF will be at the core of its fundraising strategy, with targets that will likely surpass current preliminary figures in order to ensure the sustainability of the financial mechanism beyond project completion. The fundraising strategy will be included to the body of documents to be prepared for CEO Endorsement for approval.

The project will also engage with other stakeholders from civil society and beneficiaries, which will make in-kind contributions in-line with their participation and capacities to contribute to the project results. Their detailed, specific co-financing will be described as well during the PPG stage.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
Project Coordinator	Erick Castro	3/19/2024	ERICK RICHARD CASTRO	+573175264263	ecastro@caf.com
GEF Agency Coordinator	René Gómez-García	3/19/2024	René Gómez-Garcia	+59896181288	rgomez@caf.com

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

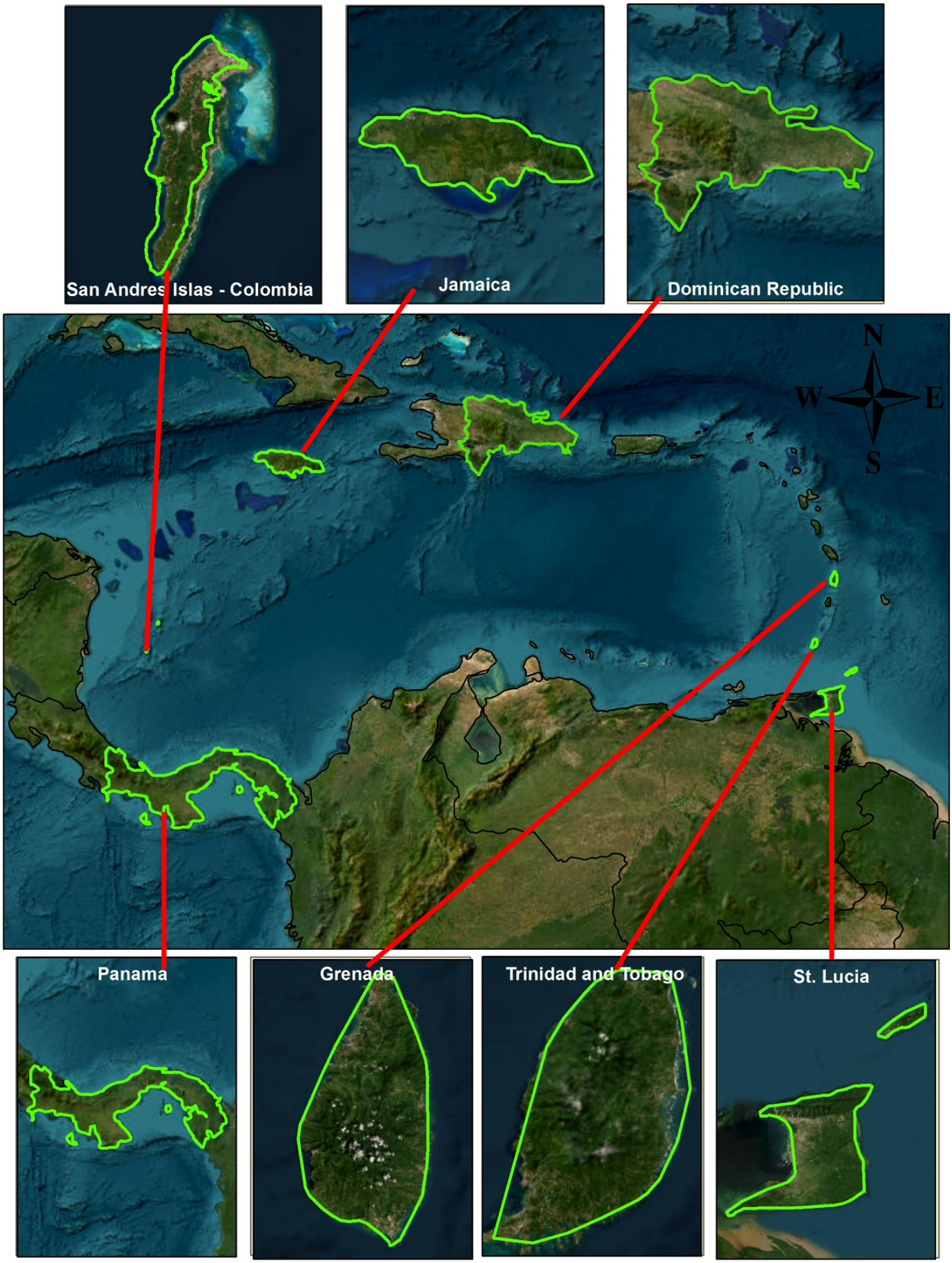
Name	Position	Ministry	Date (MM/DD/YYYY)
Hyden Romano	Managin Director	Trinidad & Tobago, Environmental Management Authority	8/13/2024
Maria Teresa Becerra Ramirez	Head of the International Affairs Office	Colombia, Ministry of Environment and Sustainable Development	8/5/2024
Raul Pinedo	Planning Analyst	Panama, Ministry of Environment	8/9/2024
Milagros De Camps	Deputy Minister of Climate Change and Sustainability	Dominican Republic, Ministry of Environment and Natural Resources	8/5/2024
Gillian Guthrie	For Permanent Secretary	Ministry of Economic Growht and Job Creation, Jamaica	9/10/2024
Eulampius Frederick	Chief Technical Officer (Ag.)	Ministry of Education, Sustainable Development, Innovation, Science, Technology and Vocational Training, Santa Lucia	9/5/2024
Nicole Clarke-Gurley	Permanent Secretary	Ministry of Mobilisation, Implementation and Transformation, Grenada	9/18/2024
Hyden Romano	Managin Director	Trinidad & Tobago	10/30/2024

Maria Teresa Becerra	Head of International Affairs Office	Colombia	10/18/2024
Raul Pinedo	Planning Annalyst	Panama	10/18/2024

ANNEX C: PROJECT LOCATION

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

Figure 6: Map showing the location of the seven project countries from a regional perspective.


San Andres Islas - Colombia
Jamaica
Dominican Republic
N
W
E
S
Panama
Grenada
Trinidad and Tobago
St. Lucia

The geo-coordinates of each of the country area is as follows:

Participating countries	Lon W	Lat N	Hectares
Colombia	-78.811	12.491	11,417,500
Dominican Republic	-71.838	17.584	14,683,931
Grenada	-61.671	12.105	34,400
Jamaica	-77.297	18.109	10,911,000
Panama	-83.007	9.431	7,532,000
Saint Lucia	-61.133	13.883	617,000
Trinidad and Tobago	-62.121	11.370	516,445

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title

SAFEGUARDS PROJECT

Environmental and Social Safeguards

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
No Contribution 0	No Contribution 0	No Contribution 0	No Contribution 0

ANNEX F: TAXONOMY WORKSHEET

Level 1	Level 2	Level 3	Level 4
Influencing Models	Transform policy and regulatory environments Strengthen institutional capacity and decision-making Convene multi-stakeholder alliances		
Stakeholders	Indigenous Peoples Private Sector Civil Society Type of Engagement	Individuals/Entrepreneurs Community Based Organization Non-Governmental Organization Academia Information Dissemination Partnership Consultation Participation	

	Local communities	Awareness Raising Education Public Campaigns Behavior Change	
Capacity, Knowledge and Research	Learning Knowledge and learning Stakeholder Engagement Plan	Theory of Change Adaptive Management Indicators to Measure Change Knowledge Management Innovation Capacity Development Learning	
Gender Equality	Gender Mainstreaming Gender results areas	Beneficiaries Sex-disaggregated indicators Gender-sensitive indicators Participation and leadership Access to benefits and services Capacity Development Awareness raising Knowledge generation	
Focal Area/Theme	Biodiversity	Protected Areas and Landscapes Mainstreaming Species Biomes	Coastal and Marine Protected Areas Productive Seascapes Fisheries Certification (National Standards) Certification (International Standards) Wildlife for Sustainable Development Mangroves Coral Reefs Sea Grasses

	International Waters Climate Change	Coastal Learning Fisheries Strategic Action Plan Implementation Large Marine Ecosystems Private Sector Marine Protected Areas Biomes Small Island Developing States Sustainable Blue Economy Development Climate Change Adaptation	Mangroves Coral Reefs Seagrasses Small Island Developing States Climate Change adaptation Nutrient run-off Noise pollution Habitat degradation Transboundary connection Private Sector Engagement Market mechanisms De-risking innovation Reliable Data Piloting of innovation Ecosystem-based adaptation Livelihoods
Rio Markers	Climate Change Mitigation 2	Climate Finance (Rio Markers)	Sustainable Development Goals