GEF-8 Program Framework Document (PFD)

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General Program Information

Program Title	
Clean and Healthy Ocean Integrated Program (CHO-IP)	
Country(ies) Global, Grenada, Jordan, Madagascar, Maldives, Mexico, Moldova, Panama, Peru, Sri Lanka, St. Kitts and Nevis, Thailand, Trinidad and Tobago, Viet Nam, Venezuela	GEF Program ID 11349
GEF Agency(ies): FAO	GEF Agency ID
Other GEF Agenc(ies): UNDP CI EBRD UNEP World Bank IADB ADB CAF	Submission Date 10/16/2023
Type of Trust Fund GET	

Anticipated Program Executing Entity(s):	Anticipated Program Executing Partner Type(s):
Department of Water Resources Management (VietNam)	Government
Ministry of Popular Power for Ecosocialism (MINEC) (Venezuela)	Government
Solid Waste Management Company of Trinidad & Tobago (SWMCOL) (Trinidad and Tobago)	Government
Cartagena Convention Secretariat (Trinidad and Tobago)	Government
Ministry of Environment (Peru)	Government
Ministry of Environment (Sri Lanka)	Government
Aqaba Development Corporation (ADC) (Jordan)	CSO
Ministry of Water and Irrigation (MWI) (Jordan)	CSO
The Nature Conservancy (St. Kitts and Nevis)	Government
	CSO

Audubon Americas (Panama)	Government
Maldives National University (MNU) (on behalf of Ministry of Environment, Climate Change and Technology) (Maldives)	Government
The Nature Conservancy (Grenada)	Government
Pollution Control Department, Ministry of Natural Resources and Environment (Thailand)	Government
NAFIN Sustainable Fund (Mexico)	GEF Agency
Ministry of Agriculture and Rural Development (SADER) (Mexico)	GEF Agency
Ministry of Environment (Moldova)	GEF Agency
Ministry of Environment and Sustainable Development (MEDD) (Madagascar)	GEF Agency
FAO (Global Coordination Project)	Others
ADB (Global Coordination Project)	CSO
CAF (Global Coordination Project)	CSO
EBRD (Global Coordination Project)	
UNESCO Intergovernmental Oceanographic Commission (IOC) (Global Coordination Project)	
Global Water Partnership (GWP) (Global Coordination Project)	
Audubon Panama (Panama)	

Sector (Only for Programs on CC):	Project Duration (Months):
	72
GEF Focal Area (s)	Program Commitment Deadline:
Multi Focal Area	8/9/2025

Taxonomy

Mainstreaming adaptation, Climate Change Adaptation, Climate Change, Climate Change Mitigation, Financing, Agriculture, Forestry, and Other Land Use, Sustainable Land Management, Land Degradation, Sustainable Agriculture, Improved Soil and Water Management Techniques, Ecosystem Approach, Community-Based Natural Resource Management, Sustainable Forest, Food Security, Coastal, Learning, Biomes, Coral Reefs, Seagrasses, International Waters, Mangrove, Marine Protected Area, Acquaculture, Transboundary Diagnostic Analysis and Strategic Action Plan Preparation, Pollution, Nutrient pollution from Wastewater, Nutrient pollution from all sectors except wastewater, Focal Areas, Coastal and Marine Protected Areas, Terrestrial Protected Areas, Protected Areas and Landscapes, Infrastructure, Tourism, Sea Grasses, Lakes, Biodiversity, Demonstrate innovative approache, Influencing models, Conference, Knowledge Exchange, North-South, South-South, Capacity, Knowledge and Research, Training, Knowledge Generation, Workshop, Seminar, Forest, Academia, Civil Society, Stakeholders, Financial and Accounting, Conservation Finance, Mainstreaming, Agriculture and agrobiodiversity, Productive Landscapes, Community Based Natural Resource Mngt, Grasslands, Wetlands, Tropical Rain Forests, Rivers, Tropical

Dry Forests, Land Degradation Neutrality, Land Productivity, Drylands, Deploy innovative financial instruments, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Convene multi-stakeholder alliances, Private Sector, Capital providers, Financial intermediaries and market facilitators, Individuals/Entrepreneurs, SMEs, Beneficiaries, Type of Engagement, Information Dissemination, Partnership, Participation, Consultation, Communications, Education, Strategic Communications, Public Campaigns, Awareness Raising, Indigenous Peoples, Local Communities, Non-Governmental Organization, Community Based Organization, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Access and control over natural resources, Access to benefits and services, Participation and leadership, Knowledge Generation and Exchange, Capacity Development, Innovation, Indicators to measure change, Adaptive management, Theory of change, Enabling Activities, Integrated and Cross-sectoral approach, Chemicals and Waste, Aquifer, Freshwater, Technology Transfer, Integrated Programs, Mangroves, River Basin, Lake Basin, Large Marine Ecosystems, Strategic Action Plan Implementation, SIDS : Small Island Dev States

GEF Program Financing (a)	PPG Amount: (c)
100,338,691.00	2,750,000.00
Agency Fee(s): (b)	PPG Agency Fee(s): (d)
9,030,469.00	247,487.00
Total GEF Project Financing: (a+b+c+d)	Total Co-financing
112,366,647.00	748,061,993.00

Project Tags

CBIT: No SGP: No

Program:

Clean Healthy Oceans

Program Summary

Provide a brief summary description of the program, including: (i) what is the problem and issues to be addressed? (ii) what are the program objectives, and how will the program promote transformational change? iii) how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs 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 program should be in section B “program description”. (max. 250 words, approximately 1/2 page)

Problem to be Addressed

1. Marine hypoxia is an expanding environmental crisis that deteriorates global ocean health, including biodiversity loss, degraded ecosystem services, and associated socio-economic harm. The combined effects of climate change and excess nutrients (eutrophication) create a chain reaction that leads to oxygen depletion in coastal marine systems. Eutrophication often triggers harmful algal blooms (HAB). As algae and other organisms die and sink to the ocean floor, the decomposition process consumes available oxygen and causes hypoxia.[1]

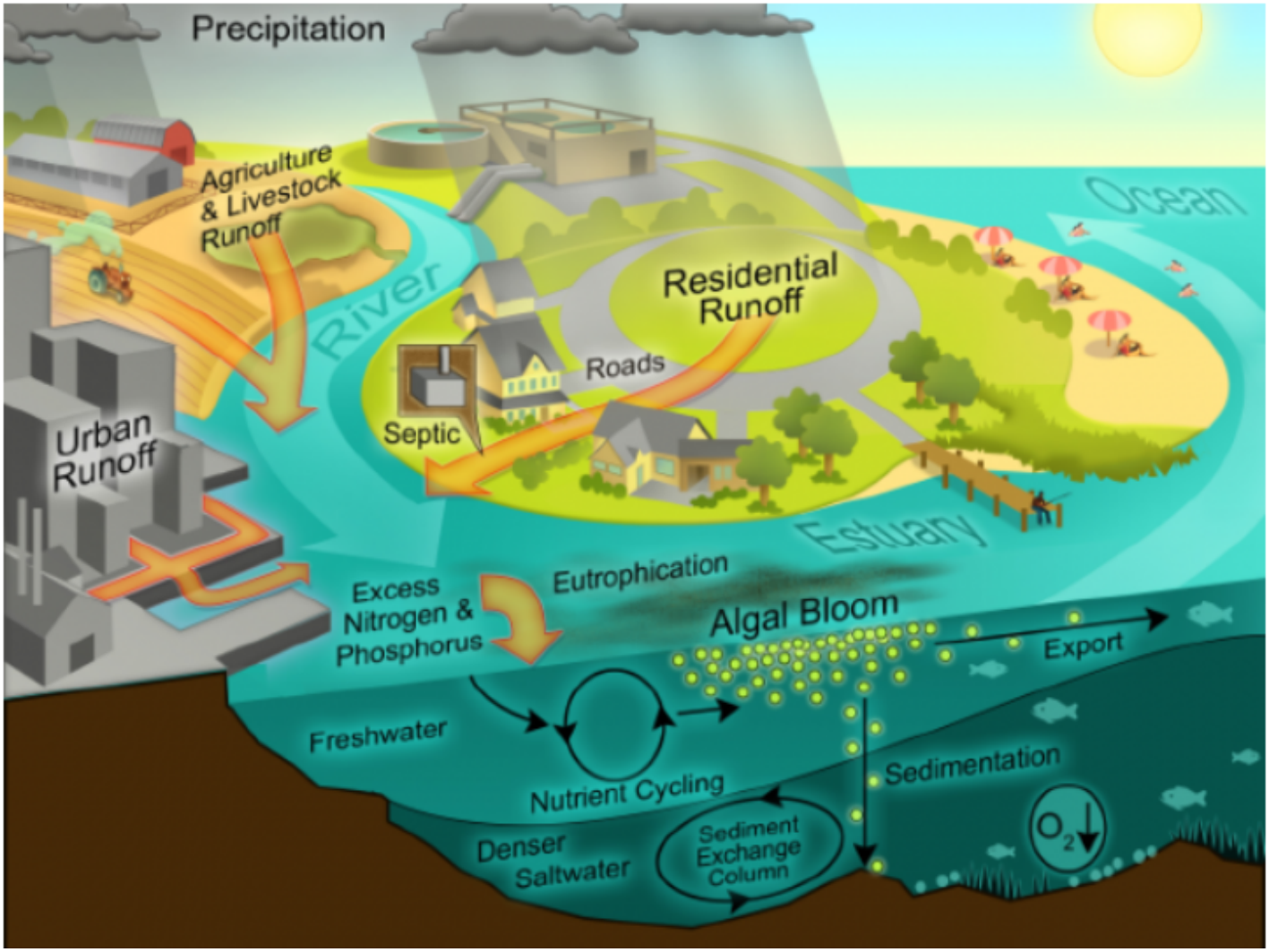

Fig 1. Schematic diagram of the different pathways of nutrient deposition into coastal waters and ensuing processes leading to eutrophication (algal blooms) and hypoxia
https://www.wri.org/initiatives/eutrophication-and-hypoxia/learn

2. Oxygen is critical to the health of the ocean. Oxygen structures aquatic ecosystems, impacts the biogeochemical cycling of carbon, nitrogen and other key elements, and is a fundamental requirement for marine life from the intertidal zone to the greatest depths of the ocean. Nearly all ocean organisms larger than a single cell, and even many microbes, require oxygen for survival. A reduction in ambient oxygen below required levels causes physiological stress, behavioral changes and ultimately death of key marine species[2].

3. Marine hypoxia was almost unknown fifty years ago, but is now a very serious and rapidly expanding global environmental concern. Millions of square kilometers of healthy marine ecosystems suffer from ecologically dangerous levels of oxygen depletion with concomitant health, economic, and ecosystem service impacts. Marine hypoxia degrades coastal ecosystems, often killing and/or displacing living organisms with negative consequences for critical marine habitats such as coral reefs[3]. Severe hypoxia under 2 mg/L can create barren “dead” zones nearly devoid of life, resulting in fish and benthic mortality[4]. Global and regional models predict that the oxygen content of marine waters will continue to decline as atmospheric and ocean temperatures rise and human population size increases[5].

Figure sent by email

Fig 2. OMZs (blue) and areas with coastal hypoxia (red) in the world's ocean (adapted after Isensee et al., 2015; Breitburg et al., 2018; including oxygen effects from Keeling and Garcia, 2002; Diaz and Rosenberg, 2008; Carstensen et al., 2014). https://ioc-westpac.org/ocean-deoxygenation/

4. Agriculture, industrial, and municipal sectors are primarily responsible for the nutrient pollution that drives expansion of hypoxic zones and associated environmental impacts. These sectors each release nitrogen, phosphorus, and organic matter that contribute to eutrophication and resulting marine hypoxia. Agriculture, including livestock production, remains the most significant anthropogenic source of land-based nutrient pollution impacting marine ecosystems globally. However, nutrient pollution from both industrial and municipal waste is increasing[6].

5. All three sectors have been historically slow to address nutrient pollution. Without better awareness, regulatory guidance, financial incentives, or access to "better" practices, private stakeholders generally remain focused upon increasing productivity or maintaining bare minimum waste management standards. The targeted sectors often prioritize near-term economic benefits over long-term environmental costs with insufficient attention given to strengthening skills, knowledge, and financing required to reduce nutrient pollution. Accustomed to "cheap" polluting practices and absent crucial pollution reduction safeguards, entrenched business interests often perceive regulations or even innovations as economically burdensome.

6. The three main barriers that stand between the current state and the desired situation are:

- *Barrier 1: Current knowledge, monitoring and awareness of ocean hypoxia threats, causes, impacts, and solutions is inadequate to motivate and mobilize urgently required corrective action.*
- *Barrier 2: Policy, regulation, strategic planning, and investment ineffectively address nutrient pollution challenges and fail to incentivize innovative solutions and best management practices.*
- *Barrier 3: Limited access to innovation and best management options, knowledge, and financing result in agriculture, municipal, and industrial practices that continually expand and increase rates of nitrogen, phosphorous, and organic waste pollution impacting oceans.*

7. Agriculture, industrial, and municipal industries are extremely large and complicated. They each involve a broad-array of stakeholders at global, regional, and national scales. These include scientific organizations helping to inform decision-making, institutions responsible for setting and financing global and regional policies, government agencies overseeing finance, agriculture, industrial and urban sectors and private enterprises engaged in the agriculture, waste management and industrial sectors. This will demand engagement of a range of global organizations, private sector representatives, IFIs, LMEs, government agencies for environment, finance, agriculture, coastal/marine and municipal, and private, science and CSO actors.

Approach to Deliver on Objectives and Added Value of Program Approach

8. The objective of the Clean and Healthy Ocean Integrated Program (CHOIP) is to address marine hypoxic zones by curbing coastal pollution from agriculture, industrial and municipal sources through policy and regulatory measures and infrastructure investments combined with nature-based solutions[7]. In doing so, the program will foster the enabling environment to advance country efforts toward sustainable blue economy

goals. The aim will be to prevent and alleviate the damaging impacts of eutrophication and hypoxia in coastal and marine environments, thereby advancing sustainable blue economies along with associated ecological, social, and economic well-being of countries and Large Marine Ecosystems (LMEs)[8].

9. Transformational change will be supported by the establishment and strengthening of knowledge management, policy, investment, and best management practice tools required to address coastal marine hypoxia. The IP will help to prevent new marine hypoxic zones, halt further oxygen depletion in current hypoxic zones, and promote innovations to assist countries restore hypoxia degraded ecosystems.

10. Organized around three technical components and one M&E component, the IP is designed to dismantle barriers and invigorate improved global, regional and national responses. The critical assumption is that improving knowledge, policy, investment, and access to best management practices will sufficiently mobilize concern for ocean health and motivate transformative change at the scale required.

11. Component 1 "Building awareness and knowledge to stimulate action and informs decision-making": The component will enhance awareness, knowledge management and political will required to stimulate action and inform decision-making to alleviate marine hypoxia. Actions will foster collaboration, constituency building and science-driven adaptive management via inclusive multi-stakeholder dialogue, governance fora, awareness campaigns, cooperative monitoring, data collection/sharing, early warning systems and systemic capture, distribution, and amplification of best practices. The component will build capacities for science and knowledge management to better inform action. This component will deliver knowledge management platforms linked at global, regional or national levels designed to capture data, report on best management practice success, and market information needed to motivate strategic action, inform decision-making, and amplify best practices.

12. Component 2 "Enhancing policy and investment frameworks to incentivize pollution mitigation": The component will support capacity building required to improve policy and financing with a focus on achievement of nutrient pollution reduction targets and adoption of NbS to alleviate marine hypoxia. Technical and capacity support will assist global, regional and national stakeholders to strengthen and implement coherent policy, regulatory, strategic planning, and nutrient reduction targets linked to financing frameworks and investment guidelines. Emphasis will be placed upon policy coherence while alleviating policies that incentivize pollution and/or limit uptake of best management practices. The component will help transform empirical data generated under Component 1 into actionable policies and targeted financial instruments. Financing capacity building and investments will support the achievement of improved policy and regulatory framework objectives, including coastal marine hypoxia reduction targets. Financing capacity development and advisory services will help to internalize sustainable finance principles within institutional operations and capture innovative finance tools and methods.

13. Component 3 "Upscaling best management practices to showcase effective solutions": The component will focus on promoting and supporting empirically-informed best management practices. Emphasis will be placed upon assisting agriculture, municipal, and industrial sectors identify, adopt, demonstrate and upscale innovative and targeted nature-based solutions designed to evince the potential to cost-effectively mitigate nutrient pollution, conserve coastal ecosystem integrity and reduce coastal marine hypoxia. The design of interventions will consider the gender gap in access resources and information and choice of communication channels related to NbS and related approaches. Best management practices will align with and inform data, knowledge management and policy frameworks and improve capacities under Components 1 and 2. This will include generating, capturing and communicating lessons, experiences and best practices to promote amplification and upscaling.

14. Component 4 "Executing monitoring, evaluation and coordination to enhance program performance impact": The component will ensure that the program and its child project are working toward achieving the

overall objectives of the IP. This will also involve effective monitoring in support of evidence-based adaptive management at project and programme levels, and coordination for enhanced program impact.

Baseline and Incremental Reasoning

15. The proposed approach will build upon the baseline. This includes promoting existing national and LME capacities, building upon global and regional programs (e.g., IOC's GO2NE), capturing emerging innovative funding opportunities (e.g., ADB's Blue and Green Bond Framework)[9], and scaling up GEF supported initiatives such as UNIDO's Transfer of Environmentally Sound Technology (TEST)[10], UNEP's International Nutrient Management System (INMS) Project[11], the Transboundary Water Assessment Programme (TWAP)[12], and CReW+[13]. Relevant information from these initiatives has been taken into account when designing the PFD and has informed the preparation of child project concept notes. The source-to-sea methodology to assess flows of pollution coming from land-based sources is applied in the CHO Programme following successful examples and practices from the Danube/Black Sea Strategic Partnership on Nutrient Reduction as well as the INMS. Moreover, innovative financing frameworks, science-based assessments, awareness raising and capacity building promoted by the Programme will capitalize on the efforts spearheaded by TWAP and CReW, not only to avoid duplication but to scale up and reinforce the findings of previous investments.

16. While this baseline offers opportunity to help advance solutions, absent GEF support, the existing situation will remain inadequate to effectively engage agriculture, municipal, and industrial waste sectors at the scale and speed required to accelerate urgently needed action.

17. GEF investment and engagement will help to catalyze a transformative change beyond the baseline from both a global program and child project level, accelerating action to support sustainable blue economies by curbing inflow of land-based pollution into the coastal environment. The GEF investment represents a fundamentally innovative and potentially highly effective opportunity to address coastal marine hypoxia with nearly US$ 750 million of co-financing leveraged and prospects to generate economies of scale for improved action at global, LME, and national levels.

Geographic Coverage

18. The CHOIP will engage fourteen (14) countries representing nine (9) LMEs. Each Child Project will contribute to the achievement of the overall goal and will advance solutions to address fundamental barriers through a shared set of complimentary components, outputs, and activities adapted to local conditions and targeting national priorities. The GCP will support the cohort of CP's to help ensure effectiveness and amplified impact while advancing and accelerating transformational change at both global and regional levels.

19. These countries were selected based upon a number of criteria, including ability to demonstrate potential for contributing to a robust portfolio, which capitalizes on opportunities where: GEF interventions may have the most significant global impact addressing marine hypoxia based on scientific knowledge, including, but not limited to, SIDS and LDCs and within high-risk LMEs; established political leadership to address hypoxia and related issues, ability to leverage significant additional funding, an openness among stakeholders to pilot innovative approaches, ability to coordinate diverse sectors (agriculture, industrial/municipal) to address cumulative impacts, and private sector willingness to invest in and seek meaningful reforms; and, cooperative management and learning among and between countries contributing to or managing pollution loads in LMEs, including through processes such as the Transboundary Diagnostic Analysis - Strategic Action Programme (TDA - SAP) approach[14].

Table 1: CHO IP's Child Projects organized by LME, GEF Agency, Total GEF Resources and Indicative Co-Financing

LME	Country	GEF Agency	GEF ID	Total GEF Resources	Indicative Co-Financing
Global	Global Child Project	FAO	11353	US$ 13,899,998	US$ 150,000,000
		ADB			US$ 25,000,000
		CAF			US$ 25,000,000
		EBRD			US$ 50,000,000
		IOC/UNESCO			US$ 1,070,000
Bay of Bengal (+ *Gulf of Thailand* + *Arabian Sea)*	Maldives	UNEP	11357	US$ 4,500,000	US$ 35,000,000
	Thailand	UNEP	11359	US$ 3,500,000	US$ 1,070,000
	Sri Lanka	FAO	11352	US$ 3,000,000	US$ 20,000,000
South China Sea	Vietnam	FAO	11350	US$ 4,333.332	US$ 45,450,000
Caribbean *(+ Gulf of Mexico)*	Venezuela	FAO/CAF	11351	US$ 16,833,325	US$ 99,500,000
	Mexico	UNDP	11360	US$ 15,000,000	US$ 89,750,000
	Trinidad and Tobago	UNEP	11363	US$ 3,500,000	US$ 5,500,000
	Panama	IBD	11356	US$ 3,300,000	US$ 43,870,000
	St. Kitts and Nevis	CI	11355	US$ 3,000,000	US$ 4,117,471
	Grenada	CI	11358	US$ 5,666,665	US$ 4,484,522
Red Sea	Jordan	EBRD	11354	US$ 3,000,000	US$ 21,000,000
Black Sea	Moldova	WB	11361	US$ 8,833,330	US$ 52,500,000
Humboldt Current	Peru	IBD	11362	US$ 10,999,999	US$ 42,000,000
Agulhas Current	Madagascar	UNDP	11364	US$ 12,999,998	US$ 32,650,000
			Total	**US$ 112,366,647**	**US$ 748,061,993**

Justification for Programmatic Approach

20. Coastal marine hypoxia is a transboundary challenge with global impacts. Challenges and potential solutions are not concentrated in a single country or a single region. They derive from cumulative actions and decisions made at global, national, and local levels. Many riparian and littoral countries often contribute nutrient pollutant to shared watersheds and/or LMEs. Currents and tides carry nutrient pollutants across borders and EEZs. A sustained programmatic approach designed to influence the identification and implementation of collaborative solutions at global, regional (LME), and national levels represents is needed to effectively address coastal marine hypoxia.

21. A programmatic approach with a Global Coordination Project (GCP) linked to a suite of coordinated Child Projects offers a unique opportunity to engage and motivate action by public, private, and civil society interests at the scale required. Through the CHOIP, an opportunity exists to engage with countries and stakeholders outside of those immediately associated with the GCP or national Child Projects.

22. The programmatic approach will enhance capacities for coordinated monitoring and tracking of nutrient pollution, hypoxia, and coastal health to promote strategic and adaptive management which is science-based. By consolidating data and insights from national child projects, the GCP aims for coherence across research,

policy formulation, and ecosystems conservation. The long-term sustainability of the GCP's efforts is guaranteed by a methodological approach rooted in an understanding of key ecological principles like interconnectivity, tipping points, and modularity. This sharing of lessons and cross-pollination between national projects facilitated via the GCP will help to magnify impact.

23. A programmatic approach will open opportunities to build upon the existing baseline and help shape a global network of informed stakeholders and nations concerned with and better equipped to advocate for hypoxia reductions. The programmatic approach will help maximize partner institutional capacity to facilitate and drive transformational change by cohesively addressing hypoxia drivers (e.g., agriculture, municipal, and industrial wastewater pollution) informed by ocean conservation/monitoring at scale. The IP will build and enhance global, LME and national platforms to accelerate awareness, amplify investments, craft policies, demonstrate best management practices (BMPs), and generate tracking and monitoring needed to solve critical marine coastal nutrient pollution challenges thereby addressing and, ultimately, reducing marine hypoxia.

24. The Global Coordination Project will engage key actors, inclusive of all GEF nations and regions, while synchronizing program LME and national level investments. Regional programs focused upon priority LMEs will be supported by ADB, CAF and EBRD. IOC will offer critical technical and scientific support across all platforms engaging stakeholders globally to contribute to improved monitoring, awareness, and knowledge.

Global Environmental Benefits and other Expected Results

25. The CHOIP will contribute to the achievement of GEBs, associated co-benefits, and advancement of sustainable blue economies. The CHOIP will strengthen the integrity and functionality of the world's marine environments by limiting nutrient inflow from point and non-point sources of land-based pollution into coastal ecosystems and, thereby, reducing coastal marine hypoxia.

26. Healthy coastal ecosystems help maintain livelihoods, food security and economic well-being while mitigating climate change, strengthening resilience and conserving globally significant biodiversity. A sustainable blue economy seeks to balance economic development with environmental protection and social well-being, recognizing that the health of the oceans and coasts, including the integrity of marine ecosystems, is essential for a prosperous and sustainable future.

27. The CHOIP will contribute to several Kunming-Montreal Global Biodiversity Framework (GBF) targets, particularly Targets 2 and 3 (inland/marine ecosystem restoration), Target 7 (pollution reduction), Target 10 (sustainable agriculture), Target 11 (disease reduction) and Target 12 (sustainable urban and densely populated areas).

28. The CHOIP will directly contribute to GEF's "Healthy Planet, Healthy People" framework. The CHOIP is designed to emphasize the interdependency between human well-being and a healthy environment. The CHOIP will seek out ecosystem-based solutions recognizing the interdependence of humans, wildlife, and the environment with targeted investments designed to generate global environmental benefits while creating innovative pathways for transforming these systems toward durability and resilience. The CHOIP will directly result in cleaner and healthier urban and rural landscapes, including the reduction of pathogens associated with agricultural and urban waste. The CHOIP will help drive greater ecosystem integrity which will improve resilience and increase local livelihood prospects.

29. The IP will ultimately result in the delivery of substantial and enduring GEBs, including following preliminary assessed contributions to GEF-8 Core Indicators (CI). Please see section B4 (Core Indicators) for additional detail.

Table2: CHO IP's contribution to the GEF-8 Core Indicators Targets

CI #	Core Indicator	Targe at PFD stage
1	Terrestrial protected areas created or under improved management	520,193 ha
2	Marine protected areas created or under improved management	423,251 ha
3	Area of land and ecosystems under restoration	96,712 ha
4	Landscapes excluding PAs under improved practices	1,274,397 ha (+143,723 ha CI 4.5)
5	Marine habitat excluding PAs under improved practices to benefit biodiversity	6,629,347 ha (+6,878,660 ha CI 5.3)
6	Greenhouse Gas Emissions Mitigated	9,188,093 tons
7	Shared water ecosystems (LMEs) under new or improved cooperative management	At least 3 LMEs (CLME, NBSLME and BOBLME)
9	Chemicals of global concern and their waste reduced	120 tons
11	People benefiting from GEF-financed investments	616,752 (318,880F / 297,872M)

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Footnotes CHO IP Program Summary:

[1] Sewage pollution, declining ecosystem health, and cross-sector collaboration, S. Wear, V, Acuna, R. McDonald, C. Font. Biological Conservation 255 (2021)
[2] The Ocean is Losing its Breath: Declining Oxygen in the World's Ocean and Coastal Waters. UNESCO/IOC, Global Ocean Oxygen Network (2018)
[3] "Increasing hypoxia on global coral reefs under ocean warming" https://www.nature.com/articles/s41558-023-01619-2
[4] Dealing with Deadzones: Hypoxia in the Ocean. NOAA. 2021. https://oceanservice.noaa.gov/podcast/feb18/nop13-hypoxia.html
[5] The Ocean is Losing its Breath: Declining Oxygen in the World's Ocean and Coastal Waters. UNESCO/IOC, Global Ocean Oxygen Network (2018)
[6] Sewage pollution, declining ecosystem health, and cross-sector collaboration, S. Wear, V, Acuna, R. McDonald, C. Font. Biological Conservation 255 (2021)
[7] Please see the GEF-8 programming directions for a full IP description: https://www.thegef.org/sites/default/files/2023-01/GEF-8_Programming_Directions.pdf
[8] For more information on the GEF's Large Marine Ecosystem approach, please visit: https://lmehub.net
[9] https://www.adb.org/sites/default/files/publication/731026/adb-green-blue-bond-framework.pdf
[10] https://www.unido.org/our-focus/safeguarding-environment/resource-efficient-and-low-carbon-industrial-production/transfer-environmentally-sound-technologies-test
[11] https://www.unep.org/gef/projects/targeted-research-improving-understanding-global-nitrogen-cycle-towards-establishment
[12] http://www.geftwap.org
[13] https://www.unep.org/cep/gef-crew
[14] https://www.thegef.org/documents/expression-interest-templates-gef-8-integrated-programs

Indicative Program Overview

Program Objective

To address marine hypoxic zones by curbing coastal pollution from agriculture, industrial and municipal sources through policy and regulatory measures and infrastructure investments combined with nature-based solutions. In

doing so, the program will foster the enabling environment to advance countries' efforts toward sustainable blue economy goals.

Program Components

Component 1: Building awareness and knowledge to stimulate action and inform decision-making.

Component Type	Trust Fund
Technical Assistance	GET
GEF Program Financing ($)	**Co-financing ($)**
19,112,131.00	142,131,779.00

Program Outcome:

<u>Outcome 1:</u> Dialogue, science and knowledge management improved to inform decision-making and accelerate collaborative action to alleviate marine hypoxia.

Output 1.1. Launch advocacy and marketing campaigns designed to increase awareness and stimulate cooperative approaches to address marine hypoxia, including global, regional (LME), and national workshops, discussions and training opportunities with a dedicated attention to women's, youth's and indigenous people's organizations.

Output 1.2. Strengthen informational programming to initiate multi-stakeholder dialogue, collaboration and action targeting policy makers, researchers, civil society representatives (including women and youth associations), private business and other relevant interests to accelerate adoption of informed hypoxia reduction actions and agreements.

Output 1.3. Establish and strengthen partnerships and alliances to specify and advance achievement of global, regional (LME) and national hypoxia reduction targets and strategies, including via coastal ecosystem integrity, blue economy, and nutrient management.

Output 1.4. Strengthen and build capacity of network of global, regional (LME) and national nutrient pollution and hypoxia monitoring, detection, and data observation and reporting systems, including a global, regional (LME) and national open access platform/portals for nutrient (N, P, Si) data with appropriate metadata.

Output 1.5. Establish and build capacities to maintain long-term monitoring strategies, low oxygen warning systems, and comprehensive assessments of point and non-point pollution sources, including mitigation and NbS effectiveness, to assist target LMEs and associated countries to better identify drivers and design effective responses to curb marine hypoxia.

Output 1.6. Implement scientific knowledge to policy maker programming to channel evidence-based data to better inform adaptive policy and financing decisions.

Output 1.7. Establish global, regional (LME) and national marine hypoxia reduction targets and indicators along with strengthened monitoring and reporting mechanisms.

Output 1.8. Operationalize knowledge management platforms designed to innovate, capture, and amplify best practices in a socially inclusive manner.

<u>Indicators</u>

Indicator 1: # of LMEs annually reporting progress towards recognized hypoxia reduction targets, including area (ha) of marine coastal ecosystems impacted by hypoxia.

Indicator 2: # of countries submitting annual, open-access nutrient pollution and coastal hypoxia related data to GCP-supported platforms.

Indicator 3: # of countries participating in GCP supported global hypoxia forum and discussions disaggregated by region and LME.

Indicator 4: # of LME's with at least three countries meeting annually to collaboratively reduce coastal zone hypoxia.

Indicator 5: # of persons participating in national ocean hypoxia reduction forums with results reported to the GCP and constituency organization data disaggregated by government, private sector, and civil society, including women's groups and indigenous people's representatives.

Indicator 6: # of individual GCP knowledge management platform users reported annually.

Component 2: Enhancing policy and investment frameworks to incentivize pollution mitigation

Component Type	Trust Fund
Technical Assistance	GET
GEF Program Financing ($)	Co-financing ($)
49,691,543.00	374,030,997.00

Program Outcome:

Outcome 2: Policy, regulation and investment frameworks strengthened to promote achievement of marine hypoxia pollution reduction targets.

Output 2.1. Promote and advance global, regional (LME), and national marine hypoxia reduction framework agreements, marine sustainable planning strategies, and policy instruments informed by science and inclusive best management practices.

Output 2.2. Build national capacities to adopt and implement model point and non-point source pollution reduction policies, strategies, and regulations, including streamlined institutional coordination, and integrating social equity considerations.

Output 2.3. Assist LME countries to strengthen and adopt strategic action programs and regional norms designed to reduce hypoxia, including zonation and validation of existing TDA, SAPs, and blue economy plans.

Output 2.4. Implement marine hypoxia awareness program targeting international financial institutions, private lending institutions, and national ministries of finance to accelerate investments supporting marine hypoxia reduction.

Output 2.5. Support key global, regional and national development banks, private financial institutions and government agencies to advance marine hypoxia reduction investments, including provision of capacity and advisory services designed to strengthen budget and investment strategies and adoption of innovative financing tools, products, and frameworks to support achievement of hypoxia reduction targets.

Output 2.6. Establish and support "investment readiness" and pipeline of potential investment opportunities for high priority hypoxia mitigation projects linked to measurable reduction targets and designed to showcase NbS potential.

Indicators

Indicator 7: # of countries that formulize, adopt, and fully fund coastal zone hypoxia strategies, gender sensitive policies, and/or regulatory frameworks inclusive of agriculture, municipal, and industrial sectors.

Indicator 8: # policy frameworks that facilitate changes in the market conditions, or provide incentives for public, private sector investments in agriculture, municipal, and industrial waste.

Indicator 9: # of innovative financial mechanisms, adopted to directly link funding with verified hypoxia-reduction practices, thereby ensuring outcome-driven investments (e.g. multi-use, multi-functional spatial planning, natural capital assessments and accounting, blue bond incubator, debt for nature swaps, etc.).

Indicator 10: # of LME-wide nutrient pollution and coastal hypoxia reduction strategies that inform national and watershed level policy and regulatory frameworks, investments and innovative abatement actions.

Indicator 11: # investments in hypoxia mitigation prioritized through financial frameworks formulated with a focus on evidence-based outcomes, e.g., utilization of impact bonds to tie payments to measurable results.

Component 3: Upscaling best management practices and investments to showcase effective solutions

Component Type	Trust Fund
Technical Assistance	GET
GEF Program Financing ($)	**Co-financing ($)**
17,200,919.00	119,689,919.00

Program Outcome:

Outcome 3: Best management practices adopted and amplified that emphasize nature-based solutions and achievement of marine hypoxia reduction targets.

Output 3.1. Establish coastal hypoxia pollution abatement training and capacity building programs targeting municipal and industrial sources in a socially inclusive manner.

Output 3.2. Identify and support priority municipal and industrial wastewater improvements that showcase inclusive best management practices, contribute to specific pollution and marine hypoxia reduction targets, and emphasize NbS.

Output 3.3. Establish nutrient pollution abatement training and capacity building programs targeting agricultural sources, and involving local constituencies (gender, youth and indigenous groups) in an inclusive manner.

Output 3.4. Identify and support priority agricultural improvements that showcase best management practices, contribute to specific nutrient pollution and marine hypoxia reduction targets, and emphasize locally appropriate and socially inclusive NbS.

Output 3.5. Identify and support priority coastal zone conservation and restoration programs showcasing NbS potential to mitigate marine hypoxia.

Indicators

Indicator 12: # of best management practices uploaded to and showcased within the GCP knowledge management platform annually.

Indicator 13: # of hectares of agricultural land reporting adoption and implementation of hypoxia reduction practices.

Indicator 14: # of urban and industrial areas with X% of increased treatment capacity.

Indicator 15: # of private SME agricultural interests reporting adoption of nature-positive practices resulting in sustained decrease of coastal hypoxia causing pollutants.

Indicator 16: # of municipal waste management facilities reporting adoption of nature-positive practices resulting in sustained decrease of coastal hypoxia causing pollutants.

Indicator 17: # of industrial pollution facilities reporting adoption of nature-positive practices resulting in sustained decrease of coastal hypoxia causing pollutants.

Indicator 18: # of women and women headed households reporting increased access to improved sanitation services.

Indicator 19: # women and women-headed households with access to improved nutrient pollution and marine hypoxia reduction practices and NbS.

M&E

Component Type	Trust Fund
	GET
GEF Program Financing ($)	Co-financing ($)
9,556,065.00	74,806,198.00

Program Outcome:

Outcome 4: IP progress, impact and contributions to marine hypoxia reduction effectively monitored, evaluated and widely reported.

Output 4.1. A gender-sensitive project M&E system designed and operational.

Output 4.2. Independent Mid-term Review and Terminal Evaluation undertaken with results fed back to project management.

Output 4.3. Organize regular meetings and discussions to facilitate IP participating countries to agree on and cooperatively monitor and evaluate progress, including data collection/sharing and generation of comparable data sets.

Output 4.4. Comprehensive monitoring, evaluation, and reporting organized and coordinated via the GCP and supported by all IP Child Projects with an emphasis upon effective tracking of contribution to GEBs and anticipated co-benefits, including related to gender equality and women's empowerment.

Indicators

Indicator 19: # of child projects participating in and contributing data/information to annual IP monitoring and evaluation meetings.

Indicator 20: # of child projects submitting regular M&E reports effectively tracking, monitoring, and evaluating progress towards coordinated IP indicators.

Indicator 21: # of child projects participating in progress towards coordinated IP indicators.

Indicator 22: # of countries cooperating with the IP adopting and reporting upon effective achievement of indicators measuring engagement and benefits flowing to women, youth and indigenous peoples.

Component Balances

Project Components	GEF Project Financing ($)	Co-financing ($)
Component 1: Building awareness and knowledge to stimulate action and inform decision-making.	19,112,131.00	142,131,779.00
Component 2: Enhancing policy and investment frameworks to incentivize pollution mitigation	49,691,543.00	374,030,997.00
Component 3: Upscaling best management practices and investments to showcase effective solutions	17,200,919.00	119,689,919.00
M&E	9,556,065.00	74,806,198.00
Subtotal	**95,560,658.00**	**710,658,893.00**
Project Management Cost	4,778,033.00	37,403,100.00
Total Project Cost ($)	**100,338,691.00**	**748,061,993.00**

Please provide Justification

PROGRAM OUTLINE

A. PROGRAM RATIONALE

Briefly describe the current situation: the global environmental problems that the program will address, the key elements and underlying drivers of environmental change to be targeted, and the urgency to transform associated systems in line with the GEF-8 Programming Directions document. Describe the overall objective of the program, and the justification for it. (Approximately 3-5 pages) see guidance here

A1 Description of Current Situation

30. Healthy coastal ecosystems help maintain livelihoods, food security and economic well-being while mitigating climate change, strengthening resilience and conserving globally significant biodiversity. A sustainable blue economy seeks to balance economic development with environmental protection and social well-being, recognizing that the health of the oceans and coasts, including the integrity of marine ecosystems, is essential for a prosperous and sustainable future.

31. The GEF Scientific and Advisory Panel (STAP) describes a sustainable blue economy as: "A concept that seeks to promote economic growth, social inclusion, and the preservation or improvement of livelihoods while ensuring environmental sustainability of the oceans and coastal areas." This includes emphasis upon "the links to global challenges: deriving equitable benefits from the ocean for current and future generations in ways that simultaneously mitigate climate change, preserve biodiversity, regenerate ocean health, and leave no one behind." STAP notes that "the ocean is central to human well-being, providing vital services such as climate regulation, food, energy, and mineral and genetic resources, as well as cultural and recreational services. Yet the health of the ocean continues to deteriorate, with many marine ecosystems at risk of collapse due to numerous interconnected anthropogenic stressors… At the same time, economic reliance on the ocean is rising, with more people living, working, and playing along the coastal ocean than ever before."[15]

32. There is indisputable evidence of the continued, widespread and unabated increase of land pollution in the ocean. Studies of various types of ocean pollution present a complex picture of the interaction between natural and anthropogenic sources. However, the impact on marine life in all its forms, with consequences for human health, is discernible.

33. Vast amounts of nitrogen, phosphorus, and organic matter pollutants are now released into the world's Large Marine Ecosystems (LMEs). The combined effects of climate change and these excess nutrients (eutrophication) create a chain reaction that leads to oxygen depletion in coastal marine systems[16]. Eutrophication triggers harmful algal blooms (HAB). As algae and other organisms die and sink to the ocean floor, the decomposition process consumes available oxygen and causes oxygen depletion or hypoxia. Oxygen depletion represents a direct threat to achieving a sustainable blue economy. Severe marine hypoxia under 2 mg/L can create barren "dead" zones nearly devoid of life, resulting in fish and benthic mortality[17].

34. Marine hypoxia zones have expanded exponentially in the last fifty years[18]. Oceans have lost nearly 2% of dissolved oxygen since the 1950's and will likely lose an additional 3 – 4% by 2100[19]. In the 1960's, approximately ten dead zones were documented[20]. By 1995, over three-hundred dead zones were recorded. In 2007, over four-hundred dead zones covered 240,000 square kilometers of global marine habitat[21]. Today there are many hundreds of dead zones suffocating millions of square kilometers of ocean[22].

Figure sent by email

Fig 3. DIN load to LMEs. Watersheds discharging to LMEs are grey; watersheds with zero coastal discharge are white. https://iwlearn.net/resolveuid/5f88ca74-982a-4686-9101-3f24e0b64d14

35. Nitrogen, phosphorus, and organic matter pollutants released from agriculture, industrial and municipal sectors are the main drivers of marine hypoxia[23]. Dead zones were almost unknown prior to agriculture's "green revolution" [24]. In the last fifty years, total agricultural land expanded from 1 billion to nearly 5 billion hectares, land equipped for irrigation doubled, livestock numbers tripled to nearly 5 billion, poultry increased fivefold to nearly 25 billion, and aquaculture increased twentyfold[25]. The result is a substantial increase in fertilizer and organic waste compounded by land and water degradation that facilitates nutrient run-off. For instance, around 35% of agriculture's nitrogen inputs eventually enter the oceans[26].

36. Water pollution by organic matter from livestock farming is now significantly more widespread and intense than urban organic pollution[27]. Global meat consumption has nearly doubled in the last thirty years. The biological oxygen demand (BOD) of pig slurry is between 30,000 – 80,000 milligrams per liter, cattle slurry 10,000 – 20,000, and silage effluents 30,000 – 80,000. The BOD of untreated domestic sewage is 200 – 500 milligrams per liter and treated domestic sewage is 20 – 60 milligrams per liter[28].

37. In the 1960's, global agriculture applied approximately 35 MMT of nitrogen and phosphate fertilizers annually with nearly all used by North American and European farmers. Global agriculture now applies an estimated 150 MMT of chemical fertilizer each year with approximately 112 MMT of nitrogen and 42 MMT of phosphate fertilizers[29]. North America and Europe consume a total of approximately 34 MMT. East and South Asia apply over 90 MMT, with China alone using 35 MMT. Latin America and the Caribbean use approximately 20 MMT. Africa consumes 6.5 MMT[30].

38. Inadequately treated municipal and industrial nutrient pollution, primarily related to wastewater management, also drive marine hypoxia. Over the last fifty years as dead zones expanded, the globe's human population increased from 3 billion to nearly 8 billion people. Wastewater treatment capacity has not kept pace with population growth, associated urbanization and economic expansion. Toilets, homes, commercial establishments and industries release a host of pollutants into coastal ecosystems, including nitrogen, phosphorous, and organic matter[31].

39. Globally, over 4.5 billion people lack access to proper sanitation and wastewater facilities[32]. The United Nations estimates that approximately 80% of wastewater is released into the environment under-treated and, in "low income" countries, only 8% of wastewater receives any treatment[33]. Over 58% of the world's reefs and 88% of the worlds seagrass are negatively impacted by human sewage[34]. Existing sewage treatment facilities, wastewater drains and pipeline networks are generally antiquated, designed for lower populations, poorly financed and/or maintained[35]. Many municipal systems continue to dump untreated or inadequately treated waste directly into the ocean[36]. Even tertiary treatment such as reverse osmosis or UV radiation may not avoid sediment stress for coastal ecosystems[37].

40. Agriculture, municipal, and industrial sources of nutrient pollution are not the only drivers of marine hypoxia. Atmospheric nitrogen, climate change and altered sea temperatures each contribute to deoxygenation[38]. Global attribution for land-based pollutants driving hypoxia is difficult to precisely estimate and varies geographically[39]. Agriculture is by far the largest source of nutrient pollution and the main driver behind the expansion, intensity, and duration of coastal hypoxic conditions[40]. Perhaps 70 – 80% of global ocean and freshwater eutrophication can be attributed to agricultural pollution[41].

41. The TWAP analysis showed an overwhelming majority of dissolved inorganic nitrogen (DIN) and Coastal Eutrophication Potential (ICEP) impacting the Bay of Bengal came from either fertilizer or manure[42]. Nevertheless, the share of hypoxia caused by municipal and industrial wastewater is increasing[43]. Municipal and industrial wastewater may now be responsible for nearly 25% - 30% of total nitrogen pollution annually released into oceans[44].

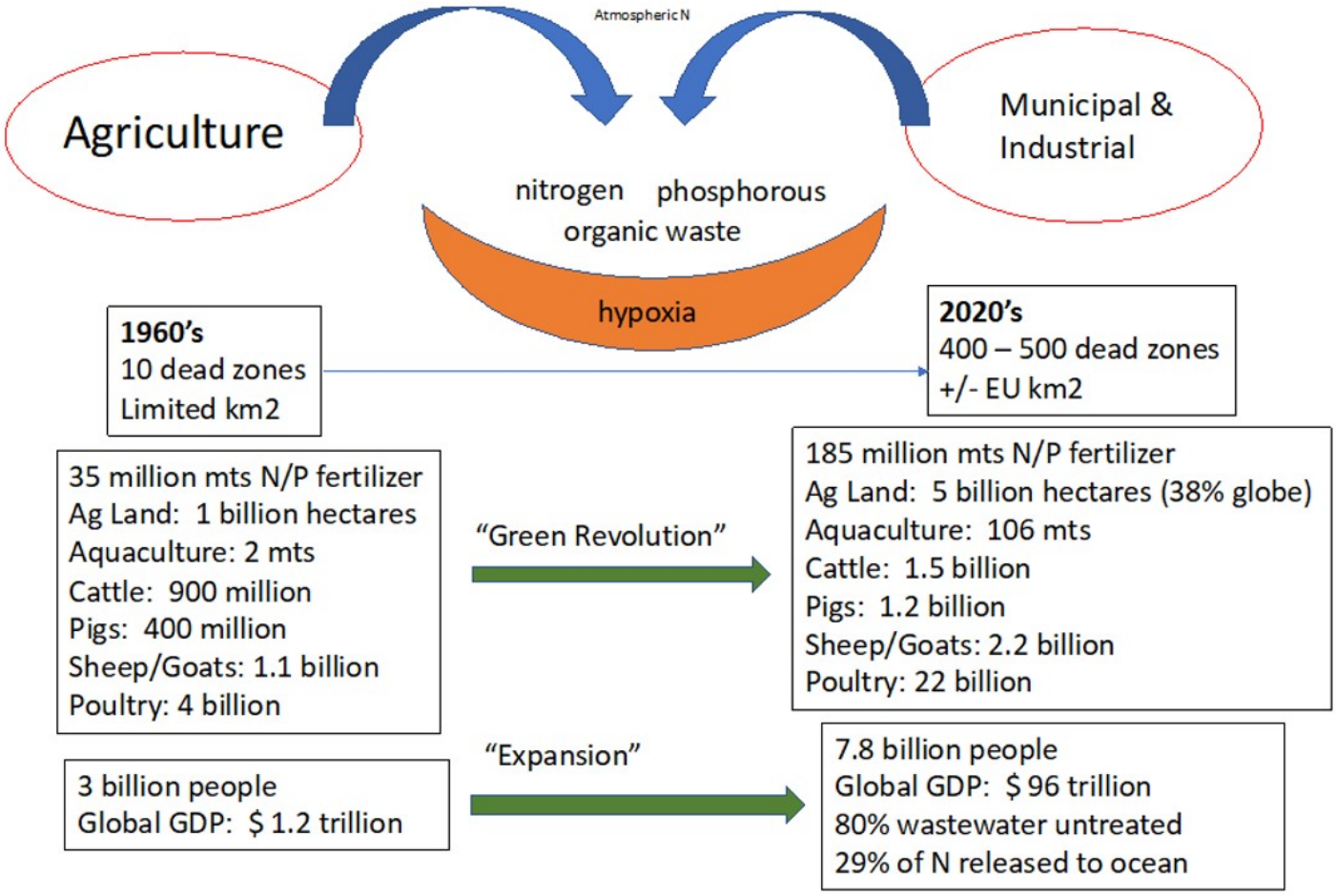

Figure 4: The Green Revolution

42. Baseline efforts certainly exist and provide a foundation for the IP to build upon. Some countries, including those engaged in this IP, have adopted national nutrient reduction policies and strategies. Many are pursuing coastal zone conservation programming. Some LME-SAPs refer to hypoxia. There are on-going science and constituency building efforts by organizations such as IOC and GWP. Previous and on-going GEF investments such as CREW+, IW:LEARN, International Nitrogen Management System (INMS) and TWAP have greatly helped to build capacity and advance knowledge and commitment.

43. However, the fundamental problem persists. Coastal zone pollution in general and "dead zones" in particular have not received adequate consideration, prioritized action, and/or investment. Agricultural expansion, environmental transformation, and human population growth over the last fifty years has not been accompanied by commensurate advances in science, policy, investment or innovation designed to mitigate ocean hypoxia. The result is that coastal hypoxia has advanced nearly unabated over the last fifty years and the trend continues.

44. Curbing ocean hypoxia and facilitating a transformation towards a new global reality where both the amount of land-based pollution reaching the oceans and resulting hypoxia is a monumental task. The scope and scale of the challenges associated are immense. Non-point source land-based pollution in particular is notoriously difficult to tackle. Ocean hypoxia is the cumulative result of billions of actors around the globe each contributing to land-based pollution. Critical stakeholders include government regulators, scientists, financial institutions and private businesses associated with nearly all forms of agriculture and municipal/industrial waste management.

45. The targeted agricultural, municipal and industrial sectors are extremely large and complicated covering stakeholders at global, regional, and national scales and historically slow to address nutrient pollution. Entrenched business interests accustomed to "cheap" polluting practices often perceive regulations or even innovations as economically burdensome and they push back. They often prioritize near-term economic benefits over long-term environmental costs. Agriculture – including livestock production - is by far the most significant anthropogenic source of land-based pollution causing hypoxia. However, absent regulatory guidance, financial incentives, or equitable access to "better" practices, private stakeholders generally remain focused upon increasing productivity or maintaining bare minimum waste management standards with insufficient attention given to strengthening skills, knowledge, and financing required to reduce nutrient pollution.

46. Even where baseline investments have been substantial, the results have been mixed. The Gulf of Mexico was one of the first LMEs to be highly impacted by hypoxia. For decades, both the US and Canada have invested substantially in monitoring, regulatory improvements, awareness and capacity building focused upon alleviating land-based sources of coastal hypoxia causing pollutants. Coastal oxygen depletion is arguably less than it would have been without these investments and actions, yet it persists[45].

47. Now numerous LMEs around the globe, many targeted by this IP, face expanding rates of coastal hypoxia. While hypoxia advances, public and private decision-makers have not prioritized the need to establish policy, investment and innovation safeguards required to alleviate nutrient pollution. The result is increasing rates of coastal hypoxia and associated loss of biodiversity, climate stability, food security and other ecological goods and services.

48. A pressing need exists to raise awareness and understanding of hypoxia across a wide range of constituents while strategically informing and accelerating implementation of targeted policies, supported by innovative financing and adequate investment and, ultimately, showcasing the cost-effectiveness of on-the-ground solutions designed to deliver GEBs and co-benefits. If the existing scenario continues into the future, coastal zone pollution in general and "dead zones" in particular will very likely expand and continue to consume more of the world's ocean with commensurate loss of biodiversity, degradation of ecosystem services, and associated social and economic challenges.

A2 Overall Objective

49. In aligning with the GEF-8 Programming Directions, the overall CHOIP objective is to address marine hypoxic zones by curbing coastal pollution from agriculture, industrial and municipal sources through policy and regulatory measures and infrastructure investments combined with nature-based solutions. In doing so, the program will foster the enabling environment to advance country efforts toward sustainable blue economy goals. The aim will be to prevent and alleviate the damaging impacts of eutrophication and hypoxia in coastal and marine environments, thereby advancing sustainable blue economies along with associated ecological, social, and economic well-being of countries and Large Marine Ecosystems (LMEs)[46].

A3 Key Barriers

50. Barrier 1: Current knowledge, monitoring and awareness of ocean hypoxia threats, causes, impacts, and solutions is inadequate to motivate and mobilize urgently required corrective action.

51. The adoption and/or implementation of effective policy, regulatory and infrastructure investments designed to curb coastal hypoxia will not occur unless stakeholders advocate for these improvements. Achieving the intended IP goal depends upon stimulus and sustained support from well-informed constituencies who more fully understand and appreciate the environmental, social, and economic

benefits associated with reducing coastal hypoxia. Unfortunately, current global, regional, and national awareness and dialog has not reached the level required to build and maintain necessary momentum.

52. Outside of scientific networks such as GO2NE, appreciation for the seriousness and urgency of coastal hypoxia is generally low[47]. Most regions (LMEs) and/or countries do not have forums designed to engage and motivate action from the required sectors of agriculture, municipal and industrial wastewater, integrated water resources management, science and coastal conservation. There are very few dialogs and policy discussions designed specifically to engage public, private, and CSO sectors in a socially inclusive manner to collaboratively identify and adopt coastal hypoxia reduction practices. Even within major global institutions, there are few opportunities for public, private and civil society stakeholders to share ideas and make informed decisions that will positively influence coastal hypoxia policy and investment.

53. A lack of immediacy and awareness of ecosystem connectivity and upstream/downstream impact often adds to policy and investment inertia. Recognizing that land-based human activities significantly impact the marine environment, there is still no adequate, nor truly effective governance that takes account of land-ocean interactions[48]. A number of factors may contribute to this. Upstream pollution sources are often far removed from coastal hypoxia sites. Parties responsible for creating hypoxia are generally not immediately impacted by hypoxia. Individual pollution contributions may be considered "small" relative to the problem. Land-based activities are normally managed through sector specific arrangements and limited in their regard for their effect on coastal resources. Terrestrial and marine resources are typically relegated to separate governance frameworks with little or no coordination.

54. Science-informed strategic and adaptive management is critical to efficiently and effectively address hypoxia challenges and to motivate action. Building awareness and motivating coordinated action depends upon the availability of science help identify the extent and drivers of the problem as well as to inform decision-making. Despite the global significance of ocean pollution, oxygen or hypoxia observations remain limited, geographically and thematically, being mainly concentrated at the ocean surface and in coastal areas. While a realistic 2-D representation of pollution is becoming a possibility, a 3-D view is still beyond reach. The current barrier results in a lack of actions against ocean pollution in part due to the absence of a more resourced and. Systematic approaches to observations and synthesis of ocean pollution required to guide the formulation of abatement measures and legally binding instruments on ocean conservation while informing actions against marine hypoxia do not exist.

55. Clear pathways have not been established for science and policy to inform and motivate public and/or private decision-makers to address ocean hypoxia at global, regional and/or national levels. Critically, there are no effective knowledge management platforms linked at global, regional or national levels designed to capture data, report on best management practice success, and market information needed to motivate strategic action, inform decision-making, and amplify best practices[49]. As a result, coastal hypoxia issues have not yet been elevated within strategic planning, policy and financing frameworks to levels necessary to effectively stimulate responsive policy/regulatory action, investments and/or advance best management practices and solutions[50].

56. Barrier 2: Policy, regulation, strategic planning, and investment ineffectively address nutrient pollution challenges and fail to incentivize innovative solutions and best management practices.

57. Even if awareness, momentum, and political will to address coastal hypoxia increase, tackling land-based pollution and coastal hypoxia via policy, regulation and investment is a highly complex endeavor. There is a need for elevated levels of technical knowledge and capacity to draft and implement effective policies supported by innovative financing. These capacities are not broadly available and access to opportunities to build them are currently limited. This lapse contributes to the fact that even the few existing policies and investments that internalize nutrient pollution challenges/solutions often fail to incentivize uptake

of improved management practices. Indeed, policies often provide tax breaks, subsidies or other production incentives or investments that directly or indirectly result in the promotion of polluting behavior.

58. Policy, regulatory, and/or investment frameworks need to be inclusive and broadly scaled to be effective. Coastal hypoxia in most instances results from multiple land-based sources contributing pollutants that cumulatively drive the ultimate impact. Reducing pollution, particularly non-point source pollution, often necessitates engaging and motivating change across large land and seascapes encompassing multiple stakeholders with diverse interests. Watersheds with multiple point and non-point pollution sources and resulting impacts are often spread across upstream jurisdictions and LMEs shared by multiple countries. This is very difficult.

59. As noted above, the translation of science into policy is not adequate. There are no international coastal hypoxia policies, agreements or strategies that clearly detail desired pollution and/or hypoxia reduction targets or indicators. LMEs at risk do not have rigorous target setting for nutrient pollution and hypoxia management. Even at national levels, policies and investment strategies rarely describe marine hypoxia reduction objectives, including targets or indicators for tolerable pollution levels from point-sources and/or non-point sources. Without incorporating these elements, policy and financing strategies are challenged to prioritize and monitor the impact of strategic interventions.

60. Policy and investment are very closely related and should be aligned. Good pollution abatement policy generally helps to define financing priorities and is dependent upon financing for implementation and achievement of stated objectives. This includes better acknowledgement of the financial risks associated with coastal hypoxia and to integrate these risks into financing strategies and lending approaches. Financing must be exponentially expanded and become much more coastal hypoxia aware. Addressing land-based nutrient pollution can be expensive, particularly in cases where infrastructure is required for treatment. Coastal zone hypoxia interventions by public and private entities are often under financed.

61. There are financial management approaches, innovative funding schemes and other investment opportunities emerging that present substantial and viable options to help pay for pollution reductions that target coastal hypoxia. Many of these opportunities are newly emerging and housed within the regional development bank GEF Agency partners associated with this IP. Available tools include financial analysis, natural capital assessments and accounting, blue bond incubators, debt for nature swaps, nutrient trading programs, financing partnership facilities, leveraged national/domestic and private sector co-finance, PPPs, performance based incentives, and other effective investment and financing tools that can and should be better aligned to target coastal hypoxia.

62. Part of the challenge is that government, financial institutions and private enterprise may have the desire to prioritize coastal hypoxia within their financing or development policies, but they lack the knowledge and capacity required to capture and maximize available opportunities. Government agencies responsible for agriculture, infrastructure, municipalities, and finance often lack access to the knowledge and technical experience required to integrate coastal hypoxia reduction strategies and financing within planning and budgeting frameworks. LME-SAPs are generally considered “un-bankable”, particularly in terms of coastal hypoxia reduction. Private enterprise does not benefit from financial incentives, innovation, and/or access to financing required to promote voluntary transformation of business practices and/or to conform with policy objectives designed to achieve coastal hypoxia reduction targets.

63. Barrier 3: Limited access to innovation and best management options, knowledge, and financing result in agriculture, municipal, and industrial practices that continually expand and increase rates of nitrogen, phosphorous, and organic waste pollution impacting oceans.

64. There are currently no significant efforts designed to systematically showcase the effectiveness of innovative nutrient pollution reduction practices along with an analysis of cost-efficiencies and benefits, including GEBs and co-benefits, to incentive increased uptake and amplification at global, regional (LME) and national levels particularly at the scale required to effectively address marine hypoxia challenges.

65. A smattering of cost-effective and innovative approaches - including NbS that provides multiple ecological benefits – exist and more are emerging. However, the architecture does not exist at global, regional or national levels to strategically demonstrate, capture, collate, market or build capacities to amplify these practices. There is no organized or methodical approach to advance, market, and build implementation capacity for NbS and other innovative coastal hypoxia reduction practices. There is no framework at global, regional, or national levels to help ensure that policy and investment are accompanied by pathways to make certain best management practices are amplified and sufficiently scaled, ensuring broad-based uptake by local stakeholders. Even FAO which is a global leader in knowledge tools targeting agriculture, contributes to global fertilizer policy, and provides direct support to national agriculture strategies has very few knowledge management tools and proven "demonstrations" specific to best management practices designed to address coastal hypoxia.

66. As noted, vested business interests generally have limited access and exposure to innovative management practices. They often "push back" on new regulatory frameworks or progressive business practices because these are often viewed as burdensome or cost-prohibitive. Both public and private decision-makers tend to perceive municipal and industrial wastewater treatment and associated upstream infrastructure needs as overwhelming and cost-burdensome, too often neglecting the problem and allowing effluent to enter freshwater and marine ecosystems. Again, they have limited experience with cost-effective NbS such as recycling nutrients and carbon from agricultural, urban and industrial systems back into bio-based systems can enrich soil, fertilize crops, feed livestock and produce biomaterials[51]. Opportunities to simply conserve valuable ecosystems and associated ecosystems services associated with habitats such as wetlands and mangroves are not identified or captured.

67. The result is that the uptake of best management practices, already stymied by policy and investment constraints, is further hindered. The identification and adoption of Best Management Practices (BMPs) – including NbS - has been slow and often not prioritized by relevant institutions. Land-based pollution continues nearly unabated even though a range of NbS offer very cost-effective and proven approaches to mitigate both agriculture and municipal/industrial wastewater pollution and reduce hypoxia.

A4 Justification and Benefit of Programmatic Approach

68. Marine hypoxia is a transboundary issue. This is not a problem concentrated in a single country or a single region, but a global issue with global impact. Once pollutants enter the ocean, they are carried by tides across borders and EEZs. Both the challenges and the potential solutions derive from cumulative actions and decisions made at global, national, and local levels. Likely the only way to effectively address marine hypoxia over the long-term is via a sustained programmatic approach designed to influence the identification and implementation of collaborative solutions at global, regional (LME), and national levels.

69. The GCP plays a critical role in this effort. By consolidating data and insights from national child projects, the GCP aims for coherence across research, policy formulation, and ecosystems conservation. The long-term sustainability of the GCP's efforts is guaranteed by a methodological approach rooted in an understanding of key ecological principles like interconnectivity, tipping points, and modularity:

- Assessing Ecosystems Resilience (Interconnectivity). The GCP prioritizes the early assessment of resilience in upstream ecosystems for an integrated preemptive approach. Ecosystems function like networks made of nodes and twines. A high level of resilience is characterized by nodes with

diverse behaviours and weak interconnections, which diminish the system's ability to propagate external shocks. Accordingly, the GCP analyzes child projects' data from interconnected ecosystems to identify resilience markers to gauge the system's ability to withstand shocks. These are useful to prioritize interventions and spending.

- Identifying Critical Thresholds (Hysteresis). Every ecosystem has limits beyond which damage is irreversible, known as tipping points. The GCP aims to identify early-warning signals to allow for prompt, although potentially resource-intensive, interventions. Such measures are designed to revert damage not only in localized degraded ecosystems but also to avoid the domino effect of failures in ecosystems interconnected.
- Evaluating Restoration Effectiveness (Modularity). The GCP analyzes child projects' data on restoration efforts of buffer zones, such as wetlands, estuaries, and upstream forests. These zones serve as natural filters for pollutants and enhance the resilience of marine ecosystems. The presence of multiple buffer ecosystems increases the resilience of the broader ecological network because each type of buffer zone operates based on unique ecological principles and serves as a form of backup, either within or alongside the main ecological network. Data regarding the cost-effectiveness of initiatives targeting buffer ecosystems is critical because it guides the formulation of a blueprint of replicable interventions that are effective and viable.

70. A programmatic approach – particularly one with a strong Global Child component - offers a unique opportunity to engage and motivate action by public, private, and civil society interests at the scale required. As designed, the GCP harnesses critical global institutions (FAO, ADB, CAF, EBRD, IOC, etc.) representing a variety of interests and skill sets. The GCP will partner with a cohort of national Child Projects, each uniquely designed to deliver GEB and co-benefits along with valuable innovations and replicable examples of effective ways to address hypoxia.

71. The GCP and each Child Project will be aligned with the IP's overall vision. Each Child Project will include a sub-set of standardized activities such as science-based monitoring, reporting, information sharing, and dialogue engagement designed to network Child Projects and link each with global information platforms established via the GCP. The purpose of this enhanced connectivity will be to facilitate discussion, innovation, awareness and sharing of information at scale. This will ensure integration at different scales, including globally and regionally between LMEs and countries, nationally through inter-ministerial committees, public and private entities as well as through communities of practice on specific technical or innovative approaches.

72. The programmatic approach will help to fast-track effective responses to address hypoxia through implementation of components supported by the GCP and reflected within each Child Project. Each component will be coordinated to aggregate and amplify impact at global, LME, and national levels. The GCP will support LME and national interventions while promoting global engagement, dialog, investment and solutions. Work at all levels will make certain land-based pollution is addressed in a more coordinated way to reflect cumulative impact and explore synchronized responses. The CHO-IP partners have worked with GEF Secretariat, other GEF agencies, regions, and countries to help identify and coordinate a suite of Child Projects designed to effectively and cohesively drive forward outsized advances in reducing land-based coastal zone pollution.

73. The programmatic approach will enhance capacities for coordinated monitoring and tracking of nutrient pollution, hypoxia, and coastal health to promote strategic and adaptive management which is science-based. All child projects will be expected to contribute to and engage with regional and global learning, contributing to platforms, building a resource information base, best management practice archive, strengthening scientific monitoring, and early warning systems established by the GCP that link nutrient pollution and coastal conservation issues at global, LME, and national levels. Projections of river nutrient

export to rivers and oceans may be strengthened, including traceability and attribution, to better monitor impacts and design strategic and targeted responses.

74. A programmatic approach will help to ensure that activities under each component at GCP and Child Project levels fully and meaningfully integrate opportunities and challenges specific to women, youth and Indigenous peoples. The GCP and each Child Project will ensure that issues of gender, youth and Indigenous peoples are cross-cutting, making certain these groups are well represented in decision-making and betterment prospects. Co-benefits to be delivered to produce employment and economic improvement opportunities and reduce the vulnerability of these groups to the negative impacts of coastal degradation and sanitation challenges.

75. This sharing of lessons and cross-pollination between national projects facilitated via the GCP will help to magnify impact. Beyond this, the programmatic arrangement will help to deliver impact at a much higher scale than would be normally possible. Through the IP, an opportunity exists to engage with countries and stakeholders outside of those immediately associated with the GCP or national Child Projects. The programmatic approach will help maximize the partner institutions exceptional capacity to facilitate and drive transformational change by cohesively addressing hypoxia drivers (e.g., agriculture and municipal/industrial wastewater pollution) informed by ocean conservation/monitoring at scale. The IP will build and enhance global, LME and national platforms to accelerate awareness, amplify investments, craft policies, demonstrate BMPs, and generate tracking and monitoring needed to solve critical coastal pollution problems. These impacts and the level of engagement will not be limited to IP member countries, but a programmatic approach will open opportunities to help shape a global network of informed stakeholders and countries concerned with and better equipped to advocate for hypoxia reductions.

A5: Stakeholders

76. A comprehensive stakeholder analysis and mapping exercise inclusive of the GCP and Child Projects will be completed during the PPG phase.

77. The IP will confront diverse land-based ocean pollution challenges. This demands cooperative action from a broad spectrum of actors, sectors and regions as both a source of nutrient pollution challenge and solutions. Through implementation of the GCP and Child Projects, the partners look forward to building constituencies and working with an even broader spectrum of private, institutional, civil society, government and GEF agency stakeholders to strengthen collaboration, elevate knowledge and awareness, motivate effective policy design, implementation and enforcement, and facilitate robust action to effectively address hypoxic zones through the reduction of agriculture, industrial and municipal pollution.

- The agriculture sector is a significant contributor to nutrient pollution, primarily due to the use of fertilizers, manure, and other agricultural practices that introduce excess nutrients into water bodies. The GCP and suite of Child projects will target agriculture sector stakeholders associated with these practices such as farm and livestock producers, fisheries and aquaculture interests, and agribusiness such as the fertilizer industry responsible for the production, distribution, and use of potential nutrient pollutants.
- The municipal sector contributes to nutrient pollution through stormwater runoff, wastewater discharges, and other urban activities. The GCP and suite of Child projects will target municipal sector stakeholders associated with and responsible for these nutrient pollution sources such as municipalities and/or private enterprises responsible for managing stormwater, sewage treatment, and land use planning; water treatment facilities treating nutrient containing effluent; and even homeowners and urban developers influencing drainage, runoff, and treatment facility capacities.

- The industrial sector releases nutrients into water bodies through processes, discharges, and runoff. The GCP and suite of Child projects will target industrial stakeholders associated with and responsible for these nutrient pollution sources such as manufacturing plants and processing facilities that release nutrient pollution; desalinization facilities; and, potentially, mining operations.
- All three sectors will demand engagement with government entities responsible for policy, financing, extension services, and planning decisions along with financial institutions at global, regional, and national levels. Success will also require engagement with private, public, and civil society entities associated with coastal and marine management, conservation and productive sector actions. Local actors for each of these sectors will be critical to the delivery of GEBs. This includes private sector business interests engaged in all aspects of agriculture along with targeted sources of industrial nutrient pollution and private parties responsible for development and urban waste management. The IP's framework has been designed to specifically target the necessary array of private, public, and CSO stakeholders to build support and incentivize the uptake of practices that shift towards nutrient pollution reductions and result in hypoxia alleviation and prevention.

78. The GCP will serve as a lynchpin facilitating outreach, engagement, awareness and coordination amongst IP associated stakeholders at global, regional (LME), and national levels. The GCP will be a service provider to public, private, and civil society actors stakeholders associated with each of the IP's national Child Projects. Each of the GCP's primary partners (FAO, ADB, EBRD, CAF, and IOC) bring with them extensive capacities to convene and engage stakeholders across all regions covering agriculture, urban/industrial waste, and coastal conservation sectors. The intended reach of the GCP will extend far beyond the IP Child Project countries to advance networks and help to build constituency and advocacy to address marine hypoxia challenges globally.

79. Stakeholder engagement and global/LME dialog is a hallmark of this IP, embedded within the IP framework, componentry, and indicators. The framework is designed and will be implemented to engage stakeholders through a variety of actions including data generation and monitoring, knowledge platforms, awareness and support building, and governance designed to invigorate strategic and informed action and investment to address hypoxia worldwide. Component 1 is focused upon building advocacy to address marine hypoxia through dialog, engagement, science and learning. Component 2 will work with stakeholders to build capacities to effectively implement and finance policies and strategies. These exercises will be designed to as opportunities for inclusivity and engagement. Component 3 will be particularly relevant to private sector actors to engage these interests in the process of showcasing that BMPs can be both profitable and contribute to marine hypoxia reductions.

80. The IP will leverage existing stakeholder engagement mechanisms at global, regional and national levels. Examples include both the Global Water Partnership and IW-Learn . The Global Water Partnership (GWP) has a global stakeholder network encompassing three-thousand partner organizations in 179 countries, including 69 accredited "Country Water Partnerships" and thirteen "Regional Water Partnerships".

81. IOC's support for this IP represents an opportunity to engage with key scientific organizations. Examples include the GO2NE – Global Ocean Oxygen Network, Global Ocean Oxygen Decade – GOOD (particularly GO2DAT), University of Utrecht, Washington State University, and Global Ocean Decade for Blue Carbon. Examples of IOC's regional networks include IOC/WESTPAC, IOC/CARIBE, IOC/IOCINDIO, IOC/IOCAFRICA, and Marine Science Institute, University of the Philippines. Each of these organizations will help to provide further connection and collaboration with regional stakeholders and particularly scientific and academic organizations. This work will include engaging

with national level stakeholders – including CP countries and others – to enhance networks and building capacities for coastal oxygen target setting, monitoring, and reporting.

82. FAO envisions the establishment of a Global Advisory Group to collect diverse stakeholders to generate solutions to nutrient pollution challenges and help to build global and LME coalitions of concern. This will include assisting to inform IP implementation to make certain of alignment with the High Level Panel for a Sustainable Ocean Economy.

83. The GCP will be designed to facilitate collaboration with existing platforms and partners such as the Global Wastewater Initiative (GW2I) , the International Water Association (IWA) , the Global Programme of Action for the Protection of the Marine Environment and Land-based Activity (GPA) , Horizon 2022 and Sustainable Blue Economy Finance Principles partners. This will include engaging with existing platforms such as GEF IW:LEARN project hosted by IOC. The GCP will also benefit of collaboration with existing network such as the Global Water Partnership (GWP) with over three-thousand partner organizations in 179 countries, including 69 accredited "Country Water Partnerships" and thirteen "Regional Water Partnerships". This will build upon, collaborate and support actions such as The Global Partnership on Nutrient Management (GPNM) , The Global Wastewater Initiative , and industry outreach forums such as the Global Water Intelligence and FAO's own market and trade publications that target various intergovernmental commodity groups .

84. Civil Society stakeholders include The Nature Conservancy (TNC), World Wildlife Fund for Nature (WWF), and World Resources Institute (WRI. These organizations are highly active in relevant science and market-based conservation initiatives. They are vital to building dialog and motivating action to address hypoxia.

85. The PPG process will provide a much more detailed analysis and mapping of stakeholders and stakeholder engagement at global, regional and national levels. However, the package of submitted and approved national child projects shows excellent potential in terms of both scope, strategic targeting, and effective stakeholder engagement. These submissions each indicate strong stakeholder engagement reflecting ability to structure programming that will effectively engage key public, private, and CSO parties.

86. Examples of regional and national organizations to be engaged include:

Agulhas Current and Somali Coastal Current	African Union Economic Commission - Union Africaine Consortium for the Conservation of Coastal & Marine Ecosystems in the Western Indian Ocean (WIO-C) Coral Reef Degradation in the Indian Ocean (CORDIO) Indian Ocean Commission (IOC) Indian Ocean Tuna Commission (IOTC) Secretariat of the Nairobi Convention South West Indian Ocean Fisheries Commission (SWIOFC) Sustainable Seas Trust (SST) United Nations Economic Commission for Africa (UNECA) Western Indian Ocean Marine Science Organization (WIOMSA) Madagascar Ministry of sanitation and the municipality

Bay of Bengal	Asia-Pacific Fishery Commission Bay of Bengal Inter-Governmental Organization (BOBP-IGO) South Asian Co-operative Environment Programme (SACEP) BOBLME Regional Coordination Unit (BOBLME SAP) Bay of Bengal Initiative for Multisectoral and Economic Cooperation (BIMSTEC) CTI-CFF Regional Secretariat Bangladesh Ministry of Environment and Forests India Ministry of Environment, Forests and Climate Change (MOEFCC); Central Pollution Control Board; selected State and city governments Indonesia Ministry of Marine Affairs and Fisheries (MMAF); Ministry of Environment and Forests (MOEF) Malaysia Ministry of Water, Land and Natural Resources Sri Lanka Ministry of Ocean Affairs, Environment and Climate Change (MOAECC), National Water Supply and Drainage Board, National Aquatic Resources Research and Development Agency Thailand Ministry of Environment and Natural Resources (MONRE) Maldives Transport Authority, Association of Tourism Industry and resorts (mobilization of multiple resorts across the Maldives), Urban Co (implementation of policies including planning and electrification), farming sector
Black Sea	Black Sea Commission Black Sea Economic Cooperation (BSEC) Black Sea MOU on Port State Control Black Sea NGO Network (BSNN)
Caribbean Sea	Caribbean Natural Resources Insitute (CANARI) Central American Commission on Environment and Development (CCAD) Gulf and Caribbean Fisheries Institute Organization of Eastern Caribbean States (OECS) Caribbean Community (CARICOM) Caribbean Regional Fisheries Mechanism (CRFM) Global Water Partnership-Caribbean (GWP-C) IOC of UNESCO Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE) Western Central Atlantic Fishery Commission (WECAFC) Trinidad and Tobago Environmental Management Authority (EMA), Institute of Marine Affairs (IMA), Ministry of Public Utilities, Ministry of Planning and Development, Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean (BCRC-Caribbean), the Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL), the Dutch Embassy

	located in Trinidad and Tobago, and Technical Consultancy of the Union of Water Boards (TAUW b.v.) Panama Global Mangrove Alliance (GMA), Environment Ministry (MiAmbiente), IDIAP, and MIDA SKN's Department of Physical Planning and the Environment (Nevis), Department of Marine Resources, and Ministry of Environment, Women in Maritime Association Caribbean SKN Chapter, SKN CSO Alliance, and SKN Women in Fisheries Sector Grenada Ministry of Fisheries; Ministry of Environment; Ministry of Mobilisation, Implementation and Transformation
Gulf of Mexico	National Aquaculture and Fishing Commission (CONAPESCA), Mexico National Fisheries Institute (INAPESCA), Mexico National Forestry Commission (CONAFOR), Mexico National Institute of Ecology and Climate Change (INE), Mexico National Oceanic and Atmospheric Administration (NOAA), United States National Water Commission (CONAGUA), Mexico UN Environment Caribbean Regional Coordinating Unit (UNEP CAR/RCU); Caribbean Environment Programme
Gulf of Thailand **South China Sea**	Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) COBSEA Secretariat (Gulf of Thailand and South China Sea LMEs (SAP))
Gulf of Thailand **South China Sea** **Bay of Bengal**	Southeast Asian Fisheries Development Centre (SEAFDEC) Coordinating Body on the Seas of East Asia (COBSEA) PEMSEA Resource Facility(Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)) Philippines Department of Environment and Natural Resources (DENR); relevant provincial and city governments
Humboldt Current	Fisheries Development Institute (IFOP) Institute of the Sea (IMARPE), Peru Permanent Commission for the South Pacific (CPPS) South Pacific Regional Environment Programme (SPREP)
Mediterranean Sea	Global Water Partnership - Mediterranean (GWP-Med) Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) UN Environment Mediterranean Action Plan - Barcelona Convention Secretariat Coordinating Unit (UNEP MAP) Union for the Mediterranean (UfM) General Fisheries Commission for the Mediterranean (GFCM)
Red Sea	Regional Organization for the Conservation of the Environment of Red Sea and Gulf of Aden (PERSGA) Jordan Ministry of Planning and International Cooperation

	Ministry of Water and Irrigation (MWI), Aqaba Development Corporation (ADC)
South China Sea	Northwest Pacific Action Plan (NOWPAP) PRC State Oceanic Administration (SOA); Ministry of Environment and Ecology (MEE) Viet Nam Ministry of Environment and Natural Resources (MONRE)

87. Following is a brief summary of stakeholder engagement conducted during the EIO and Concept Note preparation process between June and October 2023:

Child Project GEF IP	Country	Institutions / stakeholders consulted	Date of the Consultation (Month, Year)
11354	Jordan	Aqaba Development Corporation, Jordan (ADC)	July - October, 2023
		Ministry of Water and Irrigation, Jordan (MWI)	July - October, 2023
11358	Grenada	The Nature Conservancy and Conservation International	July, 2023
		The Nature Conservancy and Conservation International	August, 2023
		Katie Cramer, Arizona State University, School for Ocean Futures	August, 2023
		SKN's Department of Physical Planning and the Environment (Nevis), Department of Marine Resources, and Ministry of Environment	August, 2023
		SKN's Department of Physical Planning and the Environment (Nevis), Department of Marine Resources, and Ministry of Environment	September, 2023
		Tricia King, Department of Marine Resources	September, 2023
		The Nature Conservancy and Conservation International	September, 2023
11364	Madagascar	Ministry of Environment and Sustainable Development (MEDD), Madagascar	June - October, 2023
11357	Maldives	EPA and Meteo Service, Maldive	July - October, 2023
		National Nitrogen Action Plan	July - October, 2023
		Education Ministry	July - October, 2023
		Fisheries & Agriculture Ministry	July - October, 2023
		Transport Ministry,	July - October, 2023
		Planning Ministry and Health Ministry	July - October, 2023
		Island Councils	July - October, 2023
		Maldives Transport Authority	July - October, 2023
		Water and Sewerage Company, Maldives	July - October, 2023
		Maldives Resilient Reefs	July - October, 2023
		Island Women Development Committees	July - October, 2023
		Maldives National University	July - October, 2023
		Maldives Marine Research Institute	July - October, 2023
		UK Centre for Ecology & Hydrology	July - October, 2023
		University of Edinburgh	July - October, 2023
		Indian National Centre for Sustainable Coastal Management	July - October, 2023
		Jawaharlal Nehru University	July - October, 2023
		Plymouth Marine Laboratory	July - October, 2023
11360	Mexico	The Secretariat for Home Affairs (SEGOB)	December 2022 to October, 2023
		Ministry of Agriculture and Rural Development (SADER)	December 2022 to October, 2023
		The Interoceanic Corridor of the Isthmus of Tehuantepec (CIIT)	December 2022 to October, 2023
		National Aquaculture and Fisheries Commission (CONAPESCA)	December 2022 to October, 2023
		The National Water Commission (CONAGUA)	December 2022 to October, 2023
		National Fishing Institute (INAPESCA)	December 2022 to October, 2023
		National Forestry Commission (CONAFOR)	August, 2023
		National Institute of Indigenous Peoples (INPI)	Januray, 2023
		Ministry of Finance (SHCP) – GEF OFP	January, September, October, November, 2023
		Government of Oaxaca	August - October, 2023
		Government of Quintana Roo	August - October, 2023
		Government of Veracruz	August - October, 2023
11361	Moldova	The Ministry of Environment	August-November 2023
		Minister Mrs. Rodica Iordanov (GEF political focal point)	August-November 2023
		General Secretary Mr. Petru Tataru (GEF operational focal point)	9 October signing the updated EOI
		Division of Policy Monitoring and Evaluation	August-October 2023
		Division of Policy for Water Integrated Management	September-October 2023
11356	Panama	Ministry of Environment/Directorate of Coast and Sea	August, 2023
		Ministry of Environment/Directorate of Climate Change	September, 2023
		Ministry of Environment/Directorate of Biodiversity	August, 2023
		Ministry of Environment/Directorate of Forest	August, 2023
		Ministry of Environment/Directorate of Water Security	August, 2023
		Ministry of Environment/Directorate of Water Security/ Herrera Region & Member of watersheds of Parita, la Villa y Santa Maria	August, 2023
		Institute of Agricultural Innovation of Panama	August, 2023

11362	Peru	Vice-Ministry of Strategic Development of Natural Resources, Ministry of Environment (MINAM)	August - October, 2023
		Vice-Ministry of Environmental Management, Ministry of Environment (MINAM)	September, 2023
		National Service of Natural Areas Protected by the State (SERNANP)	August - September, 2023
		Peruvian Institute of the Sea (IMARPE)	August - September, 2023
		Environmental Evaluation and Oversight Agency (OEFA)	August - September, 2023
		Universidad Científica del Sur	August, 2023
		Provincial Municipality of Pisco	October, 2023
11352	Sri Lanka	Senior Staff members of Ministry of Environment (Ms Sujeewa Fernando, Director/Biodiversity Division; Mr Mahinda Werahera, Director/Environment Pollution Control and Chemical Management Division; Ms Nilmini Wicramarachchi, Director/Natural Resources Management Division; Ms Kulani Karunarathne, Director/International Relations Division)	July - October, 2023
		Mr Anura Wijethunga, Director/Agriculture Technology, Ministry of Agriculture	September, 2023
		Agriculture and Fisheries Sector Experts of FAO Sri Lanka Office	June - October, 2023
		(Dr W. Weerakoon, Snr Agriculture Specialist; Mr Kapila Munasinge, National Project Specialist/Agriculture; Dr Palitha Hikkaduwa Muhandiramlage, Fisheries Specialist;	
		Dr Chandrani Pushpalatha, National Project coordinator/Fisheries; Mr Mahnida Kulathilake, Project Management Specialist/Aquaculture)	
		Dr Shamen Vidanage, Country Representative, IUCN Sri Lanka Office	August, 2023
		Dr Shyamalie Weerasekara, Head/Environment Studies Division, National Aquatic Resources Research and Development Agency	September, 2023
		Mr J. A Saminda, Additional Director/Coastal, National Aquaculture Development Authority	September, 2023
		Prof Terny Pradeep Kumara, Faculty of Fisheries and Marine Sciences and Technology, University of Ruhuna	August, 2023
		Prof Buddhi Marambe, Department of Crop Science, Faculty of Agriculture, University of Peradeniya	August - September, 2023
		Prof Chamari Dissanayake, Department of Zoology, University of Sri Jayewardenapura	September, 2023
		Ms Nadeera Rajapaksha, Environmental Specialist	September, 2023
		Mr Charminda Fernando, Secretary,	August, 2023
		Sri Lanka Aquaculture Development Alliance	
		Mr Haridas Fernando, Deputy Gen Manager, Cargills Ceylon PLC.	September, 2023
11355	St. Kitts and Nevis	Department of Physical Planning and the Environment (Nevis)	August - September, 2023
		St. Kitts Tourism Authority and the St. Nevis Tourism Authority (private sector)	August - September, 2023
		The Nature Conservancy	August - September, 2023
		Department of Marine Resources	August - September, 2023
11363	Trinidad and Tobago	Solid Waste Management Company of Trinidad & Tobago (SWMCOL)	June - October, 2023
		Cartagena Convention Segretariat	June - October, 2023
		Ministry of Public Utilities, Trinidad and Tobago	June - October, 2023
11359	Thailand	Pollution Control Department, Ministry of Natural Resources and Environment, Thailand	June - October, 2023
		Coordinating Body on the Seas of East Asia	June - October, 2023
11351	Venezuela	Zulia State Government (Gobernación del Estado de Zulia) - A workshop was held with multiple stakeholders to evaluate the situation of the Maracaibo Lake in August 2023.	August, 2023
		Vicepresidency of public works and services (Vicepresidencia de obras públicas y servicios)	August, 2023
		Ministry of People's Power for Ecosocialism (MINEC)	August, 2023
		Ministry for Water surveillance (Ministerio de Atención de las Aguas)	August, 2023
		Ministry of Fisheries and Aquaculture (Ministerio de Pesca y Aquicultura)	August, 2023
		Ministry of Petroleum (Ministerio del Petróleo)	August, 2023
		Ministry of Industries (Ministerio de industrias)	August, 2023
		Ministry of Transport	August, 2023
		(Ministerio de Transporte)	
		Ministry of Public Works (Ministerio de obras públicas)	August, 2023
		Zulia State mayors	August, 2023
		Zulia State Fisheries Associations	August, 2023
		Technical roundtables for recycling of solid wastes	August, 2023
		Environmental authorities of Merida, Trujilla and Tachira states	August, 2023
		Institute for the Conservation Maracaibo Lake (ICLAM)	August, 2023
		University of Zulia	August, 2023
		Venezuela Institute of Scientific Investigations (IVIC)	August, 2023
		Petroleum of Venezuela (PDVSA)	August, 2023
11350	Vietnam	Mr. Nguyen Duc Thuan GEF OFP Vietnam	October, 2023
		International Cooperation Department, MoNRE	October, 2023
		Department of Legal Affairs, MoNRE	October, 2023
		Vietnam Administration of Sea and Islands, MoNRE	October, 2023
		Department of Climate Change, MoNRE	October, 2023
		Environment Department, MoNRE	October, 2023
		Institute of Strategy, Policy on Natural Resources and Environment, MoNRE	October, 2023
		International Cooperation Department, State Bank of Vietnam	October, 2023
		Department of Science, Technology and Environment, MARD	October, 2023
		Department of Debt Management and External Finance, Ministry of Finance	October, 2023

A6 Investments

88. The IP's total indicative co-financing currently stands at US$ 748,061,993.

89. The CHO-IP's cohort of national Child Projects have identified the following indicative co-financing:

Country/CP	Indicative Co-Financing
Grenada	US$ 4,484,522

Jordan	US$ 21,000,000
Madagascar	US$ 32,650,000
Maldives	US$ 35,000,000
Mexico	US$ 89,750,000
Moldova	US$ 52,500,000
Panama	US$ 43,870,000
Peru	US$ 42,000,000
Sri Lanka	US$ 20,000,000
St. Kitts	US$ 4,117,471
Thailand	US$ 1,070,000
Trinidad and Tobago	US$ 5,500,000
Venezuela	US$ 99,500,000
Vietnam	US$ 45,450,000
Subtotal	**US$ 496,991,993**

90. The GCP identified the following indicative co-financing.

GCP Partner	Indicative Co-Financing
FAO	$150,000,000
ADB	$25,000,000
CAF	$25,000,000
EBRD	$50,000,000
IOC/UNESCO	$1,070,000
Subtotal	**$ 251,070,000**

91. Substantial investment is required to reach the desired transformative improvements in agriculture, wastewater management, coastal conservation and monitoring, bio-based innovations and NbS required to reach impact aspirations. Co-financing is highly important under this IP to achieve measurable impact at global, regional (LMEs) and national levels. This demands coordinated efforts to consolidate funding from a variety of sources, including government, private, and development agencies.

92. Co-financing from the RMBDs will be used for actions such as pipeline origination, risk structuring, and financing structuring to blend development bank financing with other sources of private and public capital. The GCP partners are well-positioned to make certain the CHO IP benefits from extensive and tangible co-financing. The program is designed to "tap in" to funding opportunities with opportunities inclusive of agriculture improvements, urban and industrial wastewater management, and marine conservation.

93. Each of the RMDBs have a number of financing partner organizations and institutions that will be leveraged. The GCP partners regularly coordinate and leverage funding from a variety of sources, including climate funds, investment funds, governments, private institutions, and development agencies. The IP will be designed to seek out opportunities to align with alternative funding sources such as the Green Climate Fund. The Green Climate Fund has Climate Investor Two (C12) that aims to support the private sector to develop and construct climate-resilient infrastructure projects in developing countries in the water, sanitation, and ocean sectors. This program is looking to invest over US$ 145 million of GCF with approximately US$ 700 million in co-financing[64]. An example of this in action is ADB's ongoing urban water supply and waste

management investment program in Fiji. The program is a blend of financing sources including US$ 153 million ADB ordinary capital loan, a US$ 70 million European Investment Bank Loan, and US$ 31 million Green Climate Fund grant[65]. EBRD is in the initial stages of conceptualization of a GCF program targeting sustainable blue economy investments. The program will be complementary to the GEF and BMP investments and will specifically target climate benefits.

94. FAO will harness resources to support this IP, including an extensive network of platforms, expertise, regional and country offices, and a spectrum of relevant agricultural investments globally. IOC will do similar, bringing their global ocean knowledge networks and programs to help support IP implementation. The partner RMDBs are each engaged in large investments focused upon agriculture, marine conservation, wastewater management, coastal resilience, aquaculture, sustainable marine mobility (shipping and ports), and sustainable coastal tourism. The IP aligns well with on-going and planned wastewater management activities covering infrastructure, regulations, and financial capacity for numerous countries and LMEs.

95. Co-financing from ADB is drawn from ongoing and planned financing programs or projects which align with the objectives of the CHO-IP. This would include such initiatives as the ASEAN Catalytic Green Finance Facility, the SME BlueImpact Asia, the Asia-Pacific Climate Finance Fund (ACliFF), various Urban Financing Partnership Facilities, Ocean Resilience and Coastal Adaptation Fund and possibly a new Nature Solutions Finance Hub. It may also be drawn from an ongoing loan project which contributes directly to the CHO-IP objectives and core indicators.

96. ADB is preparing to leverage nearly US$ 2.5 billion in co-financing for the CHO-IP. ADB's Healthy Ocean Action Plan and Ocean Finance Initiative will leverage over $ 5 billion in investments. Pollution Prevention and Reduction is one pillar of the Action Plan associated with an Oceans Finance Framework that includes a Green and Blue Bond Financing Program. In 2022, ADB's water sector investments included US$ 7.5 billion for supply and sanitation, US$ 3.6 billion irrigation, and US$ 2.4 billion water resources management[66]. ADB's Urban Climate Change Resilient Trust Fund (UCCRTF) has linked to US$ 9.8 billion of approved investments, including private sector investments, targeting water supply, sanitation, and waste management.

97. The main objectives of the CHO-IP will be considered in preparation of any new grants, technical assistance or loans, primarily in the agriculture, natural resources (ANR) and urban and water sectors of ADB. Investments will be identified through ADB's Country Partnership Strategy process and associated indicative pipeline monitoring system for selected countries, including India, Indonesia, Viet Nam and others. For example, one such initiative is highlighted below: ADB is working with the Government of Indonesia on a proposed $ 492 million "City-Wide Inclusive Sanitation Project" which will cover three coastal cities in Indonesia. Outputs will include: (i) sanitation infrastructure expanded (sewer networks and wastewater treatment plant [WWTP]), (ii) regulatory environment strengthened, and (iii) institutional effectiveness improved. The loan is in the pipeline for late 2024.

98. EBRD is preparing to leverage nearly US$ 1.5 billion in co-financing for Child Projects. In 2020, the EBRD became a signatory of the Sustainable Blue Economy Finance Principles that EIB, the European Commission, the WWF and WRI co-founded in 2017[67]. In 2022 the EBRD also signed up to the Clean Oceans initiative[68] joining other development banks in the fight to preserve marine environments, whilst working continuously to mainstream nature-positive activities helping to protect biodiversity. Historically, EBRD has invested over US$ 7 billion in wastewater infrastructural improvements in the last fifteen years[69]. EBRD is a contributing member to the US$ 4.5 billion Clean Ocean Initiative. Under the Green Economy Transition program, EBRD has signed over US$ 50 billion in green investments and financed over 2,600 green projects expected to reduce 124 million tons of carbon emissions annually, including a range of infrastructure investments. Moreover, since 2001, EBRD has managed[70] a multi-donor and multi-IFI blue

economy fund (The Northern Dimension Environmental Partnership – NDEP) to support water and wastewater treatment alongside regulatory improvements for the Baltic and Barents Seas region.

99. Specifically for the objectives of this IP, EBRD will anchor the program in the framework of the Blue Mediterranean Partnership launched at UNFCCC COP-27. The Blue Mediterranean Partnership has an objective to enable sustainable blue economy investments. This is a joint initiative of the European Commission (EC), the Union for the Mediterranean (UfM), the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD), the Kreditanstalt für Wiederaufbau (KfW) and the Agence Française de Développement (AFD), as well as other potential future partners such as the Agencia Española de Cooperación Internacional para el Desarrollo (AECID) and the Cassa Depositi e Prestiti (CDP) beneficiary countries, as well as bilateral and multilateral donors. This will be done with the help of blended finance, concessional lending, technical assistance, and other instruments needed to prepare and speed-up public sector infrastructure investments necessary to save the Mediterranean Sea and foster innovative private sector initiatives in target countries.

100. CAF is preparing to leverage nearly US$ 1.25 billion in co-financing for Child Projects. CAF is already arranging co-financing commitments from KfW, CDP and Agence Française de Développement (AFD) for this IP. CAF is considered a leader in circular approaches to wastewater management. CAF financing installed capacity for treating 36,300,000 m3 of wastewater in 2019 alone[71]. CAF experts regularly organize dialog and investment with countries and organizations across the region. Circular approaches to wastewater management in the Caribbean are now estimated to generate US$ billions in secondary products such as energy, nitrogen, phosphorous, and compost[72]. At the COP26 in Glasgow, CAF committed to financing US$ 25 billion of "Green Operations" over the next five years targeting climate resilience, biodiversity conservation, green energy transition and nature-based solutions aligned with Paris Agreement goals. One of the first investments made under this commitment targets conservation of marine biodiversity and coastal zone resources[73]. Earlier this year, CAF announced the Marine Conservation and Blue BioTrade Fund, a US$ 1.25 billion investment of its own financial resources to protect Latin American and Caribbean Oceans. CAF also provides funding for Technical Assistance projects, for USD 3MM yearly, aimed to take a role of catalytic investment in blue economy. CAF supports the strengthening of the Conservation Marine Corridor of the Eastern Tropical Pacific Ocean, CMAR, and also supports country members willing to elaborate Sustainable Ocean Action Plans.

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Footnotes CHO IP Program Rationale:

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[22] GEF-8 Strategic Programming Directions

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[31] https://oursharedseas.com/sewage-pollution-primer/

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B. PROGRAM DESCRIPTION

This section asks for a theory of change as part of a joined-up description of the program as a whole. The program 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 PFD guidance document. (Approximately 10-15 pages) see guidance here

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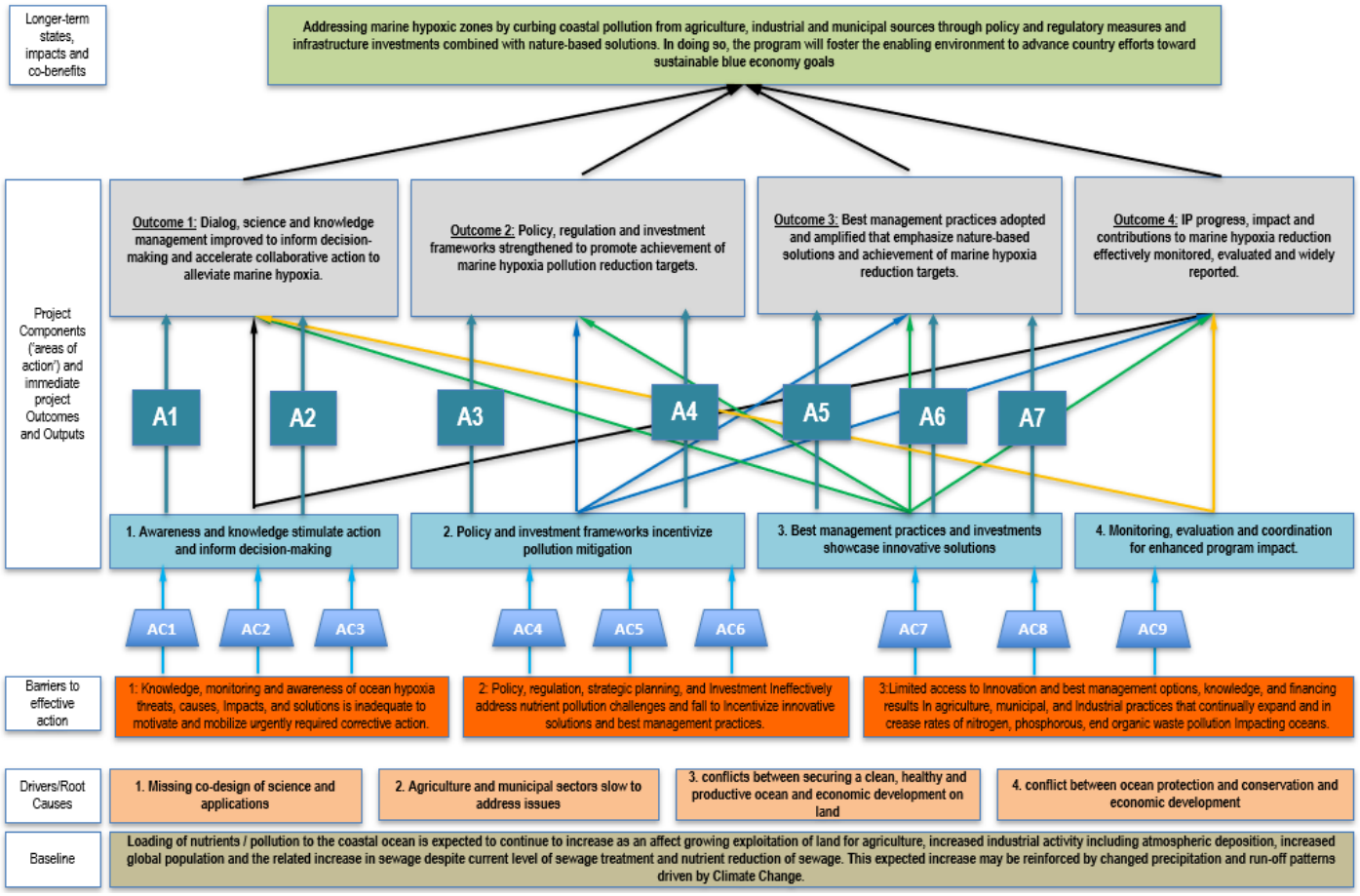
B1 Theory of Change Diagram

Please Note: The proposed Theory of Change (ToC) was developed to assure the quality of the intervention and full alignment with the GEF-8 IP strategy. The ToC diagram outlines a set of key causal pathways arising from the IP activities and the assumptions underlying these causal connections. It ensures stakeholder engagement throughout the lifecycle of the IP, helps define and analyze monitoring data that contribute to adaptive management throughout the intervention, frames ex post evaluation, and aids learning that informs the child projects. The ToC follows the STAP's guidelines on the ToC[74] and transformation[75], global science on tackling hypoxia, and extensive practical experience of the IP partners on catalyzing change.



The TOC presents 16 Critical Assumptions. Each of these has been and will continue to be fully considered as part of the IP's design and governance approach.

Assumptions describing the delivering of the IP

- A1: Stakeholders will engage in dialogue that will promote science-based decision making because trust will be strengthened by joint monitoring of hypoxic zones and agreed targets.
- A2: The constituency for tackling hypoxia will be expanded because of the awareness raised by the therefore new linkages will be created heretofore unrelated issues and priorities, including improving global health, nutrition, food security, tourism, etc.
- A3: With access to good information, BMP, etc. the knowledge generated by the IP will be applied to inform dialog and sound decision-making.
- A4: Governments and other stakeholder will incentivize innovative solutions, BMP, and NBS because there will be more bankable projects to reduce pollution linked to hypoxia.
- A5: Investors will step forward with new investments because the policy environment will be strengthened to incentivize investmets – by agreed targets and internalized costs.
- A6: Multi-sectoral approaches and an expanded policy constituency will generate more innovative policy and regulation to drive the 3update of BMP and NBS to reduce hypoxia.
- A7. The proof of concept/knowledge sharing by piloting / demonstrating BMPs shared globally through KM platforms will trigger more investment in hypoxia prevention and reduction.

Assumption describing the Opportunity for Change (AC)

- AC1. Increased the scientific capacity to observe.
- AC2. Improved knowledge of the location and condition of hypoxic zones, awareness enhanced, and reduction targets can be proposed.
- AC3. With agreed nutrient reduction targets at LME and national levels, science helps to incentivized investments at LME scale.
- AC4. Co-designed protocol for measuring relevant data to curb hypoxia caused by pollution, strengthens the trust for agreed targets, and more informed policy dialogue at all levels.
- AC5. The right policy framework is created for the market to capture costs and benefits of solutions and internalize costs.
- AC6. Targets are translated into regulatory framework to better support planning and investments.
- AC7. The creation of more investment opportunities and bankable projects for government and other stakeholders, incentivizes innovation solutions and BMP.
- AC8. Successful example of the NBS are promoted and documented, incentivizing other to take similar actions.
- AC9. The effective monitoring and coordination of the IP allows for effective indentification and dissemination of BMP and lessons learned.

These critical assumptions may be roughly organized into four very broad categories: (1) engagement in informed decision-making and dialog, (2) adoption of cohesive and effective policy and regulatory frameworks, (3) increased financing to incentivize and promote solutions, and (4) monitoring, identification and uptake of innovative, BMPs.

The innovative design and governance structure of the IP is crafted to specifically address this set of assumptions, including ensuring resilience and adaptive management. This reflects a fundamental advantage of and reason for applying a programmatic approach to addressing marine hypoxia.

As described, the IP's structure links partner institutions that each represent a unique and highly valuable set of capacities and skills. As described in the earlier EOI and this PFD, these organizations have the cumulative technical, financial, and global reputational reach required to address the complex set of challenges and issues associated with addressing coastal marine hypoxia at global, regional (LME), and national levels.

FAO, as the lead, has extensive capacities to influence dialogue, learning, policies, and investments. ADB, CAF and EBRD have considerable investment portfolios that increasingly target sustainable blue economy principles and practices (see section on Coordination and Cooperation with Ongoing Initiatives and Programs). They have each expressed strong interest in having more "bankable" investment opportunities at the LME and national levels to help support these initiatives. This includes making certain that science is in place to inform decision-making, policies are in place to reduce investment risks, and BMPs exist to provide scalable examples of proven interventions accompanied by business plans to inform investments. IOC – working with the other partners – brings the capacities to inform and drive science-based decision-making and dialogue. GWP – again working with other GCP partners – brings established connections with a wide range of stakeholders that will help build the networks required for effective engagement and communication channels.

As described, the cohort of value-adding partners will be organized via the GCP to make certain the IP's actions are on-track. This is woven into the fabric of each of the three operational components and will be strengthened via the fourth M&E component. This will ensure that the IP is addressing identified critical assumptions and positioned to take adaptive management measures as required. Each of the National Child

Projects will be designed to also reflect and embed a governance and design structures designed to further ensure resilience and adaptive management to specifically address identified Critical Assumptions. Connectivity, as described, will include formal and informal conduits for the rapid and regular exchange of information, problem diagnosis, and adaptive management required to address identified and potential later arriving challenges.

The approach will be advanced during the PPG with the GCP helping to coordinate and inform the design of each Child Project to help make certain a programmatic approach along with shared structures across and between the cohort of Child Project's exists to ensure resilience and adaptive management. This will include a full description of governance approaches, linkages between the GCP and Child Projects, monitoring and reporting responsibilities, indicators designed to generate comparable data sets, and risk management safeguards designed to flag issues and opportunities well in advance to provide for effective and efficient adaptive management responses. Each of the Child Projects – along with and supported by the GCP – will be responsible to generating detailed descriptions and plans to ensure that IP actions and investments result in resilience and enduring impact. This will include formal and informal informational exchanges well-prior to program close to make certain financing, policy, and human resource capacities are on-track. Again, these issues will be fully described during the PPG win consultation with GEF, GCP partners, and individual Child Projects.

B1.2 Summary Description Programmatic Logic, Causal Reasoning and Transformational Levers

101. The IP's proposed approach responds directly to the causal reasoning and transformational levers as presented in the GEF-8 Programming Directions.

102. The Program Objective is to address marine hypoxic zones by curbing coastal pollution from agriculture, industrial and municipal sources through policy and regulatory measures and infrastructure investments combined with nature-based solutions . In doing so, the program will foster the enabling environment to advance country efforts toward sustainable blue economy goals. The aim will be to prevent and alleviate the damaging impacts of eutrophication and hypoxia in coastal and marine environments, thereby advancing sustainable blue economies along with associated ecological, social, and economic well-being of countries and Large Marine Ecosystems (LMEs).

103. As noted, three main barriers stand between the current situation and the stated objective and goal:

- Barrier 1: Current knowledge, monitoring and awareness of ocean hypoxia threats, causes, impacts, and solutions is inadequate to motivate and mobilize urgently required corrective action.
- Barrier 2: Policy, regulation, strategic planning, and investment ineffectively address nutrient pollution challenges and fail to incentivize innovative solutions and best management practices.
- Barrier 3: Limited access to innovation and best management options, knowledge, and financing result in agriculture, municipal, and industrial practices that continually expand and increase rates of nitrogen, phosphorous, and organic waste pollution impacting oceans.

104. The overarching impetus of the IP will be to help establish the global, regional and national architecture required to systematically reduce the drivers of coastal hypoxia while demonstrating the benefits and opportunities associated with implementing improved policy, regulatory, investment and best management practices in order to contribute to the achievement of GEBs and co-benefits.

105. The IP is designed to dismantle those barriers through five transformational levers of key actions organized within three components to invigorate better global, regional and national responses to address marine hypoxia challenges. The IP across the GCP and all Child Projects is being designed to advance

solutions to address these fundamental barriers through a shared set of complimentary components, outputs, and activities. Each of the approved Child Projects follow this same logic and will contribute the achievement of the overall goal. The GCP is designed specifically to support the cohort of CP's while advancing the realization of levers at both global and regional levels.

- Lever 1. Motivate Action;
- Lever 2. Inform Action;
- Lever 3. Coordinate and Incentivize Action;
- Lever 4. Finance Action; and,
- Lever 5. Prove, Document, and Amplify Action.

106. These levers nested within the IP components will help to motivate and accelerate efforts to alleviate ocean hypoxic zones by targeting agriculture, municipal, industrial and marine sectors at global, LME, national and watershed levels engaging a range of global organizations, private sector representatives, IFIs, LMEs, government agencies for environment, finance, agriculture, coastal/marine and municipal, and private, science and CSO actors.

107. Component 1 will address the first identified barrier by building awareness and understanding designed to stimulate action and inform decision-making to reduce nutrient pollution and hypoxia. Dialog, science and knowledge management promote awareness, inform decision-making and accelerate collaborative action to address marine hypoxia.

108. The IP will work to build the constituency and advocacy required to motivate action in part by elevating and mainstreaming marine hypoxia concerns at global, regional, and national levels. The component will invigorate strategic action and informed decision-making via dialogue, governance fora, outreach, cooperative monitoring, and open-access knowledge management, early warning and global, LME, and national reporting platforms.

109. The IP will help build capacities for science and knowledge management to better inform action. This will include establishment platforms and pathways so science can inform action, including building and enhancing monitoring capacities and networks, establishing targets, monitoring target achievement, establishing early warning for target exceedance, and supporting pathways to ensure science helps motivate action and inform decision-making by public, private, and civil society actors. This component will deliver knowledge management platforms linked at global, regional or national levels designed to capture data, report on best management practice success, and market information needed to motivate strategic action, inform decision-making, and amplify best practices.

110. Component 2 will address the second identified barrier by supporting the emplacement of policy and financing structures designed to incentivize adoption of pollution mitigation practices that target hypoxia alleviation while emphasizing NbS. Policy, regulation and investment frameworks informed by science and best management practices will promote achievement of marine hypoxia pollution reduction targets and adoption of NbS designed to limit marine hypoxia. The component will offer technical and capacity support to establish policy, regulatory, and strategic planning complimented by and matched with adequate financing frameworks and investment to ensure effective implementation.

111. The IP will support capacity building required to improve policy and regulation to better coordinate and incentivize action. This will include improving policy and regulatory frameworks so that they are better informed, targeted and effectively implemented. As noted in the Child Concept Notes, this is a very high level priority for several countries. A critical element to address will includes alleviating policies that may provide tax incentives or subsidies incentivizing pollution and/or limiting uptake of best management

practices. Policy, regulation and investment should be closely aligned. The IP will support capacity building designed to invigorate strategic and efficient investment in order to finance action. This will ideally result in greater efficiencies and increased financing directed towards marine hypoxia reduction.

112. Component 3 will address the third identified barrier by showcasing innovative solutions and best management practices. Pollution mitigation practices will directly reduce marine hypoxia, emphasize nature-based solutions and amplify uptake of best management practices. The IP will provide capacity and stimulate innovation incubation required to showcase and amplify uptake of innovative nature-based best management practices required to mitigate pollution and reduce coastal hypoxia.

113. The IP through demonstration will prove, document, and amplify action. The IP will establish opportunities to showcase BMPs, demonstrate that those BMPs can be profitable while resulting in hypoxia benefit, and set up and operationalize a system that amplifies adoption at national, regional, and global levels. This will include pathways to make certain best management practices are amplified and sufficiently scaled.

114. Demand exists to address coastal hypoxia as indicated by the host of countries submitting very well aligned EOI's and the engagement of diverse GCP partners. The critical assumption is that improving knowledge, policy, investment, and access to best management practices along with the supporting architecture will sufficiently mobilize concern for ocean health and motivate transformative change required to alleviate land-based pollution and reduce global ocean hypoxia rates at the scale required.

115. The IP framework takes full account of the existing baseline and will build upon it. The baseline offers opportunity to help advance solutions. More features of this will be reflected during the PPG phase, including embedding of lessons learned and best practices.

116. However, it is already clear that absent GEF support, the existing situation will remain inadequate to effectively engage agriculture, municipal, and industrial waste sectors at the scale required to urgently accelerate needed action. The trajectory of nutrient pollution and marine hypoxia expansion established over the past fifty years is quite apparent.

117. Without better awareness, regulatory guidance, financial incentives, and access to "better" practices, current nutrient pollution trends will continue unabated with resulting negative impacts to marine ecosystems, human health and well-being, and the achievement of sustainable blue economy objectives. This impact will be felt at global, LME, and national levels as reflected in each of the approved Child Projects.

118. As noted in this document, a programmatic approach is critical to addressing the global threat of nutrient pollution and marine hypoxia. GEF investment and engagement will help to catalyze a transformative change from both a global program and child project level, accelerating action to support sustainable blue economies by curbing inflow of land-based pollution into the coastal environment. The GEF investment represents a fundamentally innovative and potentially highly effective opportunity to address coastal marine hypoxia with nearly US$ 750 million of co-financing leveraged and prospects to generate economies of scale for improved action at global, LME, and national levels.

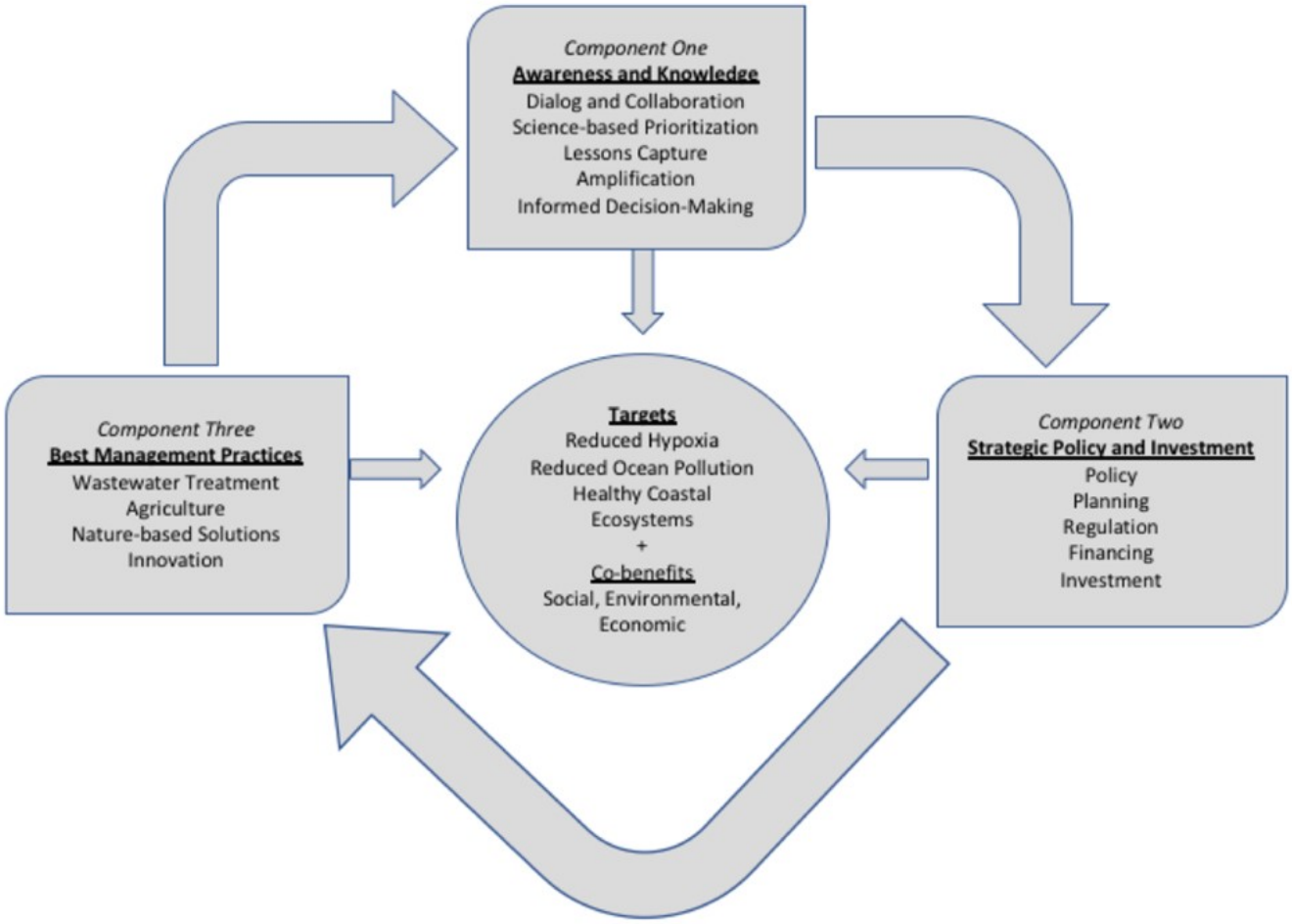


Figure 5: Structure of the CHO IP

Overview of gender equality considerations - Programmatic gender approach

Water resources and related sectors

119. Marine and coastal habitats, such as deltas, mangroves, salt marshes, sea grasses and coral reefs, are essential to countries' economic development. They sustain fisheries, tourism and coastal protection, sequester carbon, filter run-off waters and increase resilience.

120. In general, due to gendered power structures and relations, the voice of women is less heard in formal and informal institutions dedicated to water governance, such as micro-watershed committees, irrigation associations and natural resource management committees. In addition, women who do not have secure land ownership rights or run small-scale farms with small plots have limited access to water services. This also affects their access to credit, the time they can work outside their home and the possibility of using irrigation services and technologies. In water planning for domestic use, the informal economy dominated by women might be overlooked, hampering sustainable entry points for activities of many small and micro businesses, where women are overrepresented.

121. There is also emerging evidence that persisting structural barriers reinforce gender-based inequalities and accelerate the degradation of water ecosystems, and they often hinder the uptake of good practices. Underestimating women's contributions and ignoring their perspectives could lead to oversimplified decisions

in policy making and limit the sustainability of interventions, exacerbating nitrogen and organic waste pollution contributing to widespread marine hypoxia.

122. On a positive note, equitable governance arrangements and inclusive capacity development interventions and investments can improve outcomes for local populations and the environment. It will be therefore vital for the programme to engage all stakeholders in an approach underpinned by general principles of good governance including gender equality and social inclusion. Gender-responsive good practices will also be promoted as multiple examples exist of innovations promoting water recycling and efficiency implemented by women to reduce pressure on ecosystems. For example, in many contexts their access to solar-powered drip irrigation technologies proved suitable to their needs, reducing their dependency on diesel pumps and reducing pollution.

123. As for the fisheries and aquaculture sector, it is evident that populations in low- and middle-income countries are especially dependent on small-scale fisheries. FAO's recent report[76]]underlines that women account for 39.6 percent of all people working for pay or subsistence throughout the small-scale fisheries value chain and 49.8 percent of workers in post-harvest areas. As for the aquaculture sector globally, 28 percent of all workers in the aquaculture primary sector are women, as are 18 percent of all workers in the fisheries primary sector, but the share of women increases to about 50 percent of all workers when the entire aquatic value chain (including pre- and post-harvest) is considered. However, their jobs tend to be more precarious than those of men: women hold only 15 percent of the full-time positions in the aquaculture and fisheries primary sectors, and 71 percent of the part-time jobs in processing are held by women. Dedicated efforts will be made to promote FAO's SSF Guidelines[77] that urge all stakeholders in fisheries to evolve technologies appropriate to women's work in small-scale fisheries, including local cost-efficient technologies and local innovations and ensure security of tenure, including strengthening existing community tenure rights that favor women's work and reforming gender-inequitable customary tenure practices and adopt a sustainable, inclusive blue economy approach.

Gender and nature-based solutions (NbS)

124. There is broad agreement that one of the greatest challenges for sustainable management of natural resources is posed by inequalities that influence vulnerability and coping and adaptive capacity -including, gender, income, knowledge, access to resources and power. For instance, secure land title and/or land access/control for women increases sustainable land management by increasing women's conservation efforts, increasing their productive and environmentally beneficial agricultural investments such as willingness to engage in sustainable soil management. The values placed on biodiversity and ecosystem services (actual or perceived benefits) also typically differ by gender, with differentiated economic participation, share of benefits and opportunities (men tend to be responsible for extractive uses, while often for non-market purposes of these natural resources)[78]. These gender dynamics and socioeconomic dimensions will be integral considerations to be factored in the design adoption approaches to NbS in the programme and its child projects, to ensure social and environmental sustainability in conjunction.

Approach for gender mainstreaming

125. The programme will promote gender equality and ensure women's representation and involvement in decision-making that affects them and their livelihoods. Gender dimensions will be examined and a gender-specific capacity needs assessment undertaken during the PPG, from which gender-specific activities in a dedicated Gender Action Plan will be proposed taking into consideration both the GEF's and FAO's gender policies and guidelines. Efforts will be made to ensure that women are considered and consulted in all stages (design, planning, implementation and monitoring and evaluation), with dedicated measures to incorporate a gender-responsive action and related financial allocation and concrete investments across the programme.

126. To bridge persisting data gaps, the project will embed sex-disaggregated data collection and the development of gender-responsive indicators in its M&E framework and across all child projects and at the Program level to help measure progress towards women's empowerment and gender equality and social welfare impacts in meaningful and consistent way. The collection and analysis of sex-disaggregated data will help highlight the largely invisible and unacknowledged but important roles that women play in natural resources management and various subsectors of agriculture and help inform gender-transformative interventions. Gender-responsive best practices and collection of lessons learned across the global and child projects will be fine-tuned, with the aim of informing joint gender activities, knowledge sharing and awareness raising interventions.

Prerequisite and Incidental Co-benefits

127. The IP will deliver a host of global environmental benefits as described in the Summary, Indicative Program Overview and Monitoring Evaluation (B2) sections. The IP will also deliver a set of prerequisite and incidental co-benefits as detailed in STAP's recent paper, "Incorporating Co-benefits in the design of GEF Projects". Many of these co-benefits are already highlighted within the approved Child Project concept notes. These include enhanced food security, better human health, reduced waste and wastewater pollution, strengthened ecological resilience, and improved income and livelihoods.

128. The IP intends to advance a highly innovative approach to mapping and tracking co-benefits, including disaggregating prerequisite and incidental co-benefits. During the PPG phase, each Child Projects will be requested to map and detail both prerequisite and incidental co-benefits. This will include making certain indicators exist in the project frameworks to allow for proper tracking, reporting and collation via the GCP following STAP guidance with regards to steps to identify and incorporate co-benefits in GEF project design. The process will be facilitated by the GCP to improve overall IP performance and monitoring.

129. Taking a programmatic approach to identifying and monitoring both prerequisite and incidental co-benefits will assist with monitoring co-benefits beyond the existing Core Indicator 11 (number of beneficiaries). The approach will reflect and take into account existing co-benefit metrics such as SDGs. This programmatic approach to monitoring prerequisite and incidental co-benefits will strengthen knowledge management, assist with tracking progress towards the intended IP objective, and help to inform best practices and amplify positive results at global, regional and national scales.

B1.3 Detailed description of program components (interventions and activities)

130. Please note: This summary of potential IP interventions and activities will be fully elucidated, prioritized, detailed and aligned during the PPG in consultation with GEF and other partners.

Component 1: Building awareness and knowledge to stimulate action and inform decision-making

Outcome 1: Dialog, science and knowledge management improved to inform decision-making and accelerate collaborative action to alleviate marine hypoxia.

Output 1.1. Launch advocacy and marketing campaigns designed to increase awareness and stimulate cooperative approaches to address marine hypoxia, including global, regional (LME), and national workshops, discussions and training opportunities with a dedicated attention to women's, youth's and indigenous people's organizations.

Output 1.2. Strengthen informational programming to initiate multi-stakeholder dialogue, collaboration and action targeting policy makers, researchers, civil society representatives (including women and youth

associations) , private business and other relevant interests to accelerate adoption of informed hypoxia reduction actions and agreements.

Output 1.3. Establish and strengthen partnerships and alliances to specify and advance achievement of global, regional (LME) and national hypoxia reduction targets and strategies, including via coastal ecosystem integrity, blue economy, and nutrient management.

Output 1.4. Strengthen and build capacity of network of global, regional (LME) and national nutrient pollution and hypoxia monitoring, detection, and data observation and reporting systems, including a global, regional (LME) and national open access platform/portals for nutrient (N, P, Si) data with appropriate metadata.

Output 1.5. Establish and build capacities to maintain long-term monitoring strategies, low oxygen warning systems, and comprehensive assessments of point and non-point pollution sources, including mitigation and NbS effectiveness, to assist target LMEs and associated countries to better identify drivers and design effective responses to curb marine hypoxia.

Output 1.6. Implement scientific knowledge to policy maker programming to channel evidence-based data to better inform adaptive policy and financing decisions.

Output 1.7. Establish global, regional (LME) and national marine hypoxia reduction targets and indicators along with strengthened monitoring and reporting mechanisms.

Output 1.8. Operationalize knowledge management platforms designed to innovate, capture, and amplify best practices in a socially inclusive manner.

131. Component 1 will focus upon building awareness and understanding designed to stimulate action and inform decision-making designed to reduce nutrient pollution and hypoxia. This will include building awareness and alliances across and within watersheds, sectors, neighboring countries, LMEs and globally. It will ensure that communities impacted by the effects of hypoxia can participate in the decision-making affecting their lives and meaningfully contribute to programme outcomes.

132. Linkages between the GCP and Child Projects under this component will assist with identifying critical source areas, strengthening scientific monitoring, and setting in place early warning systems designed to help LMEs and countries to identify impaired or threatened waters and take corrective measures. Traceability and accountability are very challenging with effluents reaching the sea from multiple sources resulting in cumulative impacts. The anticipated program will help establish pathways for broad institutional integration to generate comprehensive and well-aligned solutions.

133. The GCP will launch a global awareness program designed to elevate knowledge, action and investment. This will target key actors at global, LME, and national levels. The global awareness program will draw lessons from and amplify the experiences of each funded child project and broadcast results with a dedicated attention to women's, youth's and indigenous people's organizations' perspectives and communications channels.

134. The GCP will help to establish and strengthen global multi-stakeholder platforms, science based decision-making and strategic investments, and facilitate significant scale-up of action in countries and LMEs. This will include helping to generate linkages between science and policy platforms, accelerate and facilitate action on global and regional commitments, advance new financial tools and products, facilitate knowledge management and sharing of lessons learned, develop "how to" guides and stimulate innovation and technology development.

135. An IP Steering Committee and a more broad-based Global Advisory Group will be established. The GAG would bring in stakeholders representing targeted LMEs, private agricultural commodity organizations, targeted municipalities and sustainable cities organizations, scientific organizations, and others to help build global and regional coalitions of concern. This will include assisting to inform IP implementation to make certain of alignment with the High Level Panel for a Sustainable Ocean Economy.

136. The GAG will bring in "downstream" stakeholders in targeted LMEs representing institutions, socio-economic actors, foundations etc. as well as "upstream/land-based" stakeholders such as private agricultural commodity organizations, targeted municipalities and sustainable cities organizations; scientific and civil society organizations representing women's, youth and indigenous perspectives and allowing the full source-to-sea spectrum to be part of the GAG.

137. Each of the RMBD partners will organize and facilitate working groups at the regional and LME level to advance hypoxia awareness and action across LME, regional, and national platforms. This will likely be facilitated in part by national Child Project engagement along with GWP support.

138. The IP will strengthen and/or create multi-stakeholder dialogues, promote science-based evidence to inform policy platforms and facilitate knowledge management and sharing of lessons learned. Multi-stakeholder dialog will ensure that coastal pollution efforts are coordinated at all levels: regionally between countries, nationally through inter-ministerial committees, public and private entities as well as through communities of practice on specific technical or innovative approaches. International and regional multi-sectoral dialogs will be supported, including Source to Sea approaches designed to build nutrient pollution reduction cooperation among countries.

139. This will include building awareness and alliances across and within watersheds and related communities, sectors, neighboring countries, LMEs and globally. The combined networks of the GCP partners presents an excellent opportunity for the IP to have a deep global and regional reach that will effectively accelerate and mainstream nutrient pollution and hypoxia solution packages within agriculture, wastewater, and ocean conservation communities, inclusive of all FAO global platforms and national offices, IOC science and monitoring partners, RMDB contacts, and government, civil society, and private sector associates. This includes working with the private sector to increase engagement and recognize opportunities to promote corporate social responsibility. In addition, a preliminary gender and socio-economic analysis to understand barriers, gaps, and opportunities will to local partnerships with community-based initiatives. There is a strong case for collaboration with the health and water, sanitation, and hygiene (WASH) sectors to assess the water and sanitation needs of vulnerable and indigenous groups, so they can be empowered to take on new roles, and participate in nutrient pollution mitigation agendas.

140. The GCP will assist a cohort of countries, LMEs and regions not directly engaged in IP Child Projects to participate in dialogs and knowledge management designed to increase global understanding of and take actions towards address land based sources of pollution. This includes increasing the quality and quantity of available date on coastal zone pollution and links to hypoxia. This may include LME wide nutrient reduction strategies based upon SAPs.

141. Multi-stakeholder Dialogues will encompass stakeholder mapping and analysis along with Source to Sea assessments. This will be accompanied by an analysis of governance, policy, institutional, and managerial realities as well as the state of natural resources across the source to sea continuum to identify: (i) key problems and issues as well pressures leading to [marine] pollution, focusing on nutrients pollution (ii) prerequisites and impediments for implementing the source-to-sea action (iii) priority policy actions and/or technical interventions/investments to address known and pressing land-based pressures leading to nutrient

pollution. Consultation meetings with authorities, key stakeholders, developmental partners (donors, IFIs etc.), will be used to agree on feasible priority interventions and investments.

142. The multi-stakeholder dialogues will facilitate awareness raising, exchange of experience and lessons learned and peer learning in an inclusive manner (representing gender, youth and indigenous perspectives). In addition to the face-to-face regional events/meetings, a knowledge management approach will be used along with a digital space of exchange and reference. These are the elements of the establishment of Communities of Practice. The latter will be an output of the IP that will assist in the sustainability of the IP results.

143. The dialogues will engage pollution stakeholders, with an emphasis upon the private sector, both those that need to deal with the effects of pollution and those that are linked with its generation at all levels: regionally between countries, nationally through inter-ministerial committees, public and private entities as well as through communities of practice on specific technical or innovative approaches. International and regional multi-sectoral dialogues will be supported, including Source to Sea approaches designed to build nutrient pollution reduction cooperation among countries.

144. The IP will collaborate with existing platforms and partners, including the Global Wastewater Initiative (GW2I)[79], the International Water Association (IWA)[80], the Global Programme of Action for the Protection of the Marine Environment and Land-based Activity (GPA)[81], Horizon 2022 and Sustainable Blue Economy Finance Principles[82] partners.

145. International and regional multi-sectoral dialogs will be supported, including Source to Sea approaches designed to build nutrient pollution reduction cooperation among countries. The GCP will specifically assist a cohort of countries, LMEs and regions not directly engaged in IP Child Projects to participate in dialogs and knowledge management designed to increase global understanding of and take actions towards address land based sources of pollution. This includes increasing the quality and quantity of available date on coastal zone pollution and links to hypoxia. This may include LME wide nutrient reduction strategies based upon Strategic Action Programs (SAPs).

146. The IP will build upon and coordinate with initiatives such as the Global Water Partnership[83] and IW-Learn[84]. This will build upon, collaborate and support actions such as The Global Partnership on Nutrient Management (GPNM)[85], The Global Wastewater Initiative[86], and industry outreach forums such as the Global Water Intelligence87 and FAO's own market and trade publications that target various intergovernmental commodity groups[88].

147. Seeking inputs and engagement from civil society organizations at all levels will be key, including groups such as the Ocean Sewage Alliance that collaborates with a global network of conservation, science, and advocacy organizations to raise awareness and action[89].

148. The GCP will enhance and build knowledge and information management platforms expanding upon the existing baseline and experience and sectoral knowledge of FAO, the RMDBs and IOC. Efforts will include established baseline work such as the Global Partnership on Nutrient Management (GPNM) and regional examples such as the South Asian Nitrogen Hub which is pioneering UK-South Asia research partnership to enable South Asia to adopt and champion a strategic approach to nitrogen management, as a key step towards the Sustainable Development Goals. The IP will build upon the established GEF baseline, including efforts such as the Danube River Basin: Boosting Capacities for Nutrient Reduction and Transboundary Co-Operation Project.

149. As noted above, the GCP will engage Global Water Partnership90 in the implementation of many of these activities using its experience in establishing and sustaining scaled multi-stakeholders policy dialogues for purpose and communities of practice, its track record in engaging with the private sector and focus on

diversity and inclusion, social equity, and women's role in the integrated and sustainable management of water resources. as well as its global network encompassing three-thousand partner organizations in 179 countries, including 69 accredited “Country Water Partnerships” and thirteen “Regional Water Partnerships”.

150. Coastal pollution at all scales requires a more comprehensive detection and monitoring system. The program will assist with identifying critical source areas and setting in place early warning systems, helping LMEs to identify impaired or threatened waters and take corrective measures. Traceability and accountability are very challenging with effluents reaching the sea from multiple sources resulting in cumulative impacts. The anticipated program will help establish pathways for broad institutional integration to generate comprehensive and well-aligned solutions. The GCP will work with Child Project to assist countries and regions (LMEs) to establish improved monitoring and tracking programs to better understand pollutant pathways from source to sea. These systems will help decision-makers at all levels to more precisely focus pollution abatement investment and action.

151. The GCP will support IOC to facilitate creation of a network tasked with conducting surveys and reporting to annual inform the status of hypoxia and associated land-based pollution at global, regional (LME) and national scales. This will include an assessment of current nutrient data holders and capacities to identify the current gaps and needs globally and particularly for participating LMEs and countries. This will lead to the improvement of global, regional (LME) and national observation networks providing data and information linked to the launch of a new global hypoxia data platform/portal that adheres to the FAIR principles to integrate different databases and promote data sharing and collaboration. The platform will benefit from guidance on how to measure or model nutrients, long-term monitoring strategies in coastal areas for nutrients in place, and protocols/tools to identify and quantify sources of nutrient pollution. This will allow for assessments at global, regional (LME) and national levels designed to inform planning, policy, and financing. The global hub will link with regional hubs to be established with RMBD partner support and national hubs associated with each child project. The approach will include capacity building extended to improve data generation and analysis skills, development of pathways to inform and incentivize planning, policy and financing frameworks, and outreach to private sector interests to help build awareness and incubate innovation.

152. The GCP will particularly extend these capacity building services to each of the funded Child Projects. This will include capacity development activities to increase human capabilities in person, remote and hybrid (e.g. using the IOC Ocean Teacher Global Academy platform) to observe ocean oxygen, nutrients and dissolved organic matter, set nutrient load targets, designed to inform model regulations and develop national strategies/policies to reduce coastal pollution (e.g., Marine Sustainable Planning strategies). This may include trainings for oceanographic data analysis and development of data products (targeted at policy makers) and promoting knowledge sharing through engaging ocean literacy activities, focusing on younger generations, including social media presence, the development of videos, stories, games, and other interactive educational materials.

153. This will include the identification of LME “hot spots” to more effectively and strategically target hypoxia. This will focus upon assisting countries where communities are most vulnerable. These efforts will be directed towards assisting global, regional and national players understand the extent of the issue, find cooperative solutions, prioritize and strategically invest, and realize implementation. The IP will facilitate the development of LME nodes supported by partner RMDBs. CAF, for instance, is promoting the Latin American and the Caribbean marine and ocean Observatory to support countries access to information, technology and key tools for financial access and operations.

154. Working together through the IP, these partner institutions we will be able to create a network of information generation, management and distribution to enhance knowledge and build communities of

practice. Information to build science-based decision-making capacity is closely linked to the awareness building, policy, and strategic financing.

155. The IP will build and enhance global, LME and national knowledge management platforms to accelerate awareness, amplify investments, craft policies, and generate tracking and monitoring needed to solve critical coastal pollution problems. All child projects will be expected to contribute to and engage with regional and global learning. The alignment of institutions partners with this GCP represents a unique opportunity to bring a concerted effort to address the causes and motivate action help solve these issues.

156. The GCP and cohort of Child Projects will enhance and build knowledge and information management platforms expanding upon the existing baseline and experience and sectoral knowledge of FAO, the RMDBs and IOC. All child projects will be expected to contribute to and engage with regional and global learning, contributing to platforms, building a resource information base, best management practice archive, strengthening scientific monitoring, and early warning systems established by the GCP that link nutrient pollution and coastal conservation issues at global, LME, and national levels.

157. FAO is a global depository for data, leads a number of relevant global assessments, and up-to-date statistics on a range of relevant sectors including fertilizer use and nutrient budget[91] IOC leads and/or engages with global ocean monitoring organizations such as GO2NE, IOCCP and GOOS. Each of the RMDBs have access to and work closely with LME as well as Ministries of Finance and Infrastructure.

158. The IP will help to understand and better identify the sources of pollution and hypoxia which is indispensable to develop strategic and adaptive mitigation strategies for policy action. This may include ecosystem health and nutrient pollution report cards for impacted, at-risk LMEs.

159. The GCP will work to make certain international dialog, knowledge sharing, collaborative solutions, scientific and technical monitoring, and early warning systems are inclusive of all at risk regions and LMEs. The IP partners will each support the GCP to make certain LME level platforms help to build awareness and alliances across neighboring countries, including those that will not execute child projects under the IP. Global reach is important and can be delivered by the GCP partners. For instance, the IOC finds a surprising absence of reported hypoxia in much of the tropics which may be due to under-reporting and a lack of consistent monitoring efforts.

160. The IP will support the establishment of global, regional (LME), and national nutrient pollution and ocean hypoxia reduction targets. These targets will help guide the identification and prioritization of hypoxia reduction actions. These targets and baseline numbers will assist with the generation of measurable indicators to help monitor and evaluate advances in curbing ocean hypoxia. The targets may be supported by voluntary national and LME reports outlining on-going efforts to such as monitoring, regulatory framework improvements, increased and/or re-directed financing, and/or uptake of best management practices designed to reduce land based pollution and resulting ocean hypoxia. The targets, guidelines, and reports will serve to enhance the global body of knowledge and facilitate coordinated efforts to address the multiples sources that contribute to global hypoxia.

161. Science to policy approaches will be used to systematically and strategically capture data and information to be fed into informed-decision making practices. A major emphasis will be building upon the baseline to create a network engaging all sectors for monitoring, early warning and solution promotion. This will include bringing together guidance from scientists, politicians, managers and the public.

162. The GCP and child projects will support the generation of guidelines and “how to manuals” for best management practices covering policy, finance, NbS and on-the-ground production. Each child project will advance systems transformation, meaningfully contribute to GEBs, integrate cross-cutting themes and levers

for transformation, and fully commit to engage with the coordination platform. Each project will contribute appreciably to core indicator targets. Child projects will offer innovation, showing creative ways to solve coastal zone pollution to advance global solutions well beyond business as usual. This will include consumer awareness and consumer driven programs to incentivize adoption of best management practices.

163. The Global Program will gather and disseminate best practices, including designing model policy and financing frameworks (developed under Component 2) to be distributed for upscale and adoption. Sharing of good practice on design and implementation of infrastructure investments which address nature-positive, blue economy objectives will be enhanced. This could include support for experiential cross-learning for countries, government-industry partnerships, city twinning arrangements, and 'how to guides". This will include linkages with the global platform to assist cross-sectoral coordination and coherent policy and regulatory instruments across multiple LMEs. The Annual LME Consultation meeting facilitated through the IW:Learn project will provide an important platform for sharing best practices and disseminating results amongst the LME community.

Component 2: Enhancing policy and investment frameworks to incentivize pollution mitigation

Outcome: Policy, regulation and investment frameworks strengthened to promote achievement of marine hypoxia pollution reduction targets.

Output 2.1. Promote and advance global, regional (LME), and national marine hypoxia reduction framework agreements, marine sustainable planning strategies, and policy instruments informed by science and inclusive best management practices.

Output 2.2. Build national capacities to adopt and implement model point and non-point source pollution reduction policies, strategies, and regulations, including streamlined institutional coordination, and integrating social equity considerations

Output 2.3. Assist LMEs to strengthen and adopt strategic action programs and regional norms designed to reduce hypoxia, including zonation and validation of existing TWAPs, SAPs, and blue economy plans.

Output 2.4. Implement marine hypoxia awareness program targeting international financial institutions, private lending institutions, and national ministries of finance to accelerate investments supporting marine hypoxia reduction.

Output 2.5. Support key global, regional and national development banks, private financial institutions and government agencies to advance marine hypoxia reduction investments, including provision of capacity and advisory services designed to strengthen budget and investment strategies and adoption of innovative financing tools, products, and frameworks to support achievement of hypoxia reduction targets.

Output 2.6. Establish and support "investment readiness" and pipeline of potential investment opportunities for high priority hypoxia mitigation projects linked to measurable reduction targets and designed to showcase NbS potential.

164. Component 2 will support the emplacement of policy and financing structures designed to incentivize adoption of nutrient pollution mitigation practices that target hypoxia alleviation. Effort will inform coordinated policy formulation processes that link policy reforms with needed financing and implementation on the ground. Policy and regulatory reforms will enhance cross-sectoral coordination with a whole-of-society approach incorporating gender youth and indigenous perspectives and promote coherent policy and regulatory instruments, incentivize investments in pollution prevention, and build awareness and alliances across neighboring countries.

165. Financing improvements will include support to quantify environmental externalities, facilitate increased domestic finance allocation for wastewater collection and treatment, and re-align subsidies to incentivize agricultural production designed to reduce nutrient pollution. The component will help leverage and build capacities to capture and manage substantial infrastructure funding. This will include wastewater treatment targeting urban areas and large-scale agriculture. The component will build policy and financing frameworks that promote the innovation, investment and adoption of regenerative and NbS practices that are socially inclusive and gender-responsive.

166. A key IP achievement will be to assist countries to formulize, adopt, and implement comprehensive regulatory frameworks designed to address land-based sources of pollution causing hypoxia, inclusive of agriculture, municipal, and industrial sectors. Regulatory responses and cooperative agreements would be strengthened to prevent point and non-point source nutrient pollution, guide behaviors, and protect water quality, including innovative monitoring, target setting and economic instruments. This may include strengthening LME-wide nutrient pollution and coastal hypoxia reduction strategies to help inform national and watershed level policy and regulatory frameworks, investments and innovative abatement actions.

167. The development and adoption of improved policies, strategies, and financing designed to stimulate adoption of improved practices will be supported, including implementation investments. Emphasis will be upon improvements that disincentive polluting behavior and guarantee effective implementation of conservation action.

168. The global platform will develop model regional (LME) and national policies and strategies. This includes providing support for national coordinated policy formulation processes linked to policy reforms urgently needed to stimulate investment and on-the-ground implementation.

169. An example is the International Code of Conduct for the Sustainable Use and Management of Fertilizers and voluntary guidelines. This tool endorsed by COAG provides a locally adaptable framework and voluntary set of practices with which governments, the fertilizer industry, agricultural extension and advisory services, supporting academic and research institutions, actors in the nutrient recycling industry, civil society and end-users can contribute to sustainable agriculture and food security from a nutrient management perspective[92]. With the presence of female farmers currently with more limited access and decision - making power, building capacities through gender-responsive advisory services promoting sustainable practices and the4R Nutrient Stewardship (using the right nutrient source, at the right rate, at the right time and in the right place) will contribute to environmental and gender co-benefits.

170. This will include linkages with the global platform to assist cross-sectoral coordination and coherent policy and regulatory instruments across multiple LMEs. The Annual LME Consultation meeting facilitated through the IW:Learn project will provide an important platform for sharing best practices and disseminating results amongst the LME community, aimed at the full range of its constituents, representing women's, youth and indigenous people's perspectives.

171. Actions will inform and incentivize the emplacement of coordinated policies to address agriculture, wastewater, and coastal zone conservation. National development plans and associated financing structures are a key area for reform. These strategies often determine priorities and investments in agriculture, wastewater treatment, and coastal zone conservation. Subsidies and taxation policies often incentivize polluting behavior. Addressing this issue will be critical to securing healthy coastal ecosystems. Finance reforms will quantify environmental externalities, facilitate increased financing allocation for nature-positive agriculture and improved wastewater collection and treatment, and incentivize pro-conservation coastal zone management practices. CAF is already supporting Sustainable Ocean National Action Plans for two countries and is expected to support at least ten countries by 2026 with USD 1.25 MM in TA available.

172. Conservation policies and strategies will help to identify and protect critical habitat, set-in-place conservation parameters for development, prioritize conservation actions, establish pollution mitigation targets and priorities, and direct development to reduce impervious surfaces and preserve natural areas to maintain ecosystem services and reduce run-off.

173. The Global Program will gather and disseminate best practices, including designing model policy and financing frameworks to be distributed for upscale and adoption. An example is the International Code of Conduct for the Sustainable Use and Management of Fertilizers and voluntary guidelines. This tool endorsed by COAG provides a locally adaptable framework and voluntary set of practices with which governments, the fertilizer industry, agricultural extension and advisory services, supporting academic and research institutions, actors in the nutrient recycling industry, civil society and end-users can contribute to sustainable agriculture and food security from a nutrient management perspective[93]. Agreements such as the Nanjing Declaration on Nitrogen Management (Nanjing Declaration, 2004), the EU Water Framework Directive, and certain national water quality regulations and strategies offer additional examples and entry points.

174. The GCP will consider supporting an international framework agreement on addressing hypoxia. Each child project will consider similar agreements for target LMEs. The program will support and promote effective international policy instruments such as the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR)[94], the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention)[95], and the Convention for the Protection of the Mediterranean Sea (Barcelona Convention)[96]. This may build upon the new CBC GBF. Consideration will be given to the Manila Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (2012), the Bali Declaration on the Protection of the Marine Environment from Land-based Activities (2018); and the Protection of the marine environment from land-based activities Resolution 11 adopted by the United Nations Environment Assembly on 15 March 2019.

175. The GCP will support and promote effective international policy instruments such as the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR)[97], the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention)[98], and the Convention for the Protection of the Mediterranean Sea (Barcelona Convention)[99]. The program will build upon the Manila Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (2012), Bali Declaration on the Protection of the Marine Environment from Land-based Activities (2018), and the United Nations Environment Assembly Resolution 11 “Protection of the marine environment from land-based activities” (2019). The GCP will consider building on this initiatives to support an international framework agreement on addressing hypoxia. Each child project will consider similar agreements for target LMEs. FAO will assist this through the GCP with improved integration of nutrient reduction targets focused upon addressing the global agricultural sector’s contributions to ocean hypoxia.

176. Regulatory targets and achievement means for best management practices, pollution standards, production practices, training priorities, strategic infrastructure development, species and habitat conservation, land use planning, coastal zone development and integrated water resources management will be enhanced. The program will support and build upon successful pollution regulatory target programs such as effluent standards, cost recovery, Total Maximum Daily Loads (TMDLs) and ratcheting compliance to allow polluters time to adjust practices and financing. The program will support landscape level approaches that blanket point and non-point source polluters. Strategic information and knowledge frameworks will support countries to adopt nutrient criteria policies and monitor for effectiveness.

177. Institutional frameworks will be improved build investment, policy adjustment, monitoring, and behavioral change at a large scale with numerous actors. Addressing coastal zone pollution demands solutions that draw upon diverse agencies and stakeholders for both the agriculture and municipal/industrial sectors. This is particularly important in terms of strategically addressing both agriculture and wastewater sectors that involve multiple private and public entities where cost-recovery and cumulative impact are often challenged by inadequate collaboration and engagement early in the design process. Systems supported by the IP will help to establish institutional frameworks designed to strategically align planning, financing, regulation and results monitoring.

178. The IP will support model financing frameworks and investment guidelines. Each Child Project will be encouraged to develop an investment strategy to identify and define a specific pipeline of bankable investments needed to reduce the inflow of land-based pollution into the coastal environment or to improve implementation of investments already identified. Activity will be galvanizing support from the private sector, including business and financial institutions. Support will be given for countries to more effectively mainstream the issue of hypoxia and point/non-point source pollutant abatement within national budgets and finance strategies. This will include development of model strategies via the GCP for inclusion, reference and uptake by select Child Projects. Sharing of good practice on design and implementation of infrastructure investments which address nature-positive, blue economy objectives will be enhanced. This could include support for experiential cross-learning for countries, government-industry partnerships, city twinning arrangements, and “how to guides”.

179. Each RMBD will help internalize blue financing principles into country partnership strategy processes and influence the sovereign and private sector lending and investment portfolios at country and regional levels. Each RMDB will provide a set of services for its Development Member Country (DMC) governments; as well as child projects under the IP which are aligned with the CHO Global Platform. The RMDB will provide capacity development and advisory services on finance frameworks; internalizing sustainable finance principles within institutional operations; and innovative finance tools and methods (e.g. multi-use, multi-functional spatial planning, natural capital assessments and accounting, blue bond incubator, debt for nature swaps, etc.). This will include facilitation of financing to support investment readiness and project preparation for new generation of infrastructure investments to address pollution reduction, biodiversity loss and climate change in oceans, coastal and marine sector, such as regenerative nature-based investments and blue business models. This could be through existing financing partnership facilities (FPFs) or externally-managed funds, with a view to leverage national / domestic and private sector co-finance. This will include opportunities to build on bankable investment frameworks identified in relevant LME SAPs and National Action Plans (NAPs).

180. Each of the IP’s RMDBs will be critical to this effort helping to shift towards a future scenario where government, financial institutions, and private enterprise to achieve two objectives. First, to more fully integrate hypoxia within decision-making structures including investment risk assessments. Secondly, to facilitate the adoption of subsidy, taxation and investment approaches designed to stimulate and incentivize hypoxia reduction.

181. ADB, for instance, will provide a set of services for its Development Member Country (DMC) governments; (including national child projects under the IP) which are aligned with the CHO Global Platform. This will be structured around 4 interrelated pillars.

182. Under Pillar 1 ADB will work to improve ‘bankability’ of a priority LME Strategic Action Program / Plan. Details will be determined during the PPG. ADB will likely prioritize the Bay of Bengal. Through the IP, ADB will engage with the Secretariat and key stakeholder bodies and help to review and validate the Transboundary Water Assessment Program (TWAP), existing SAP, and blue economy plans (national and regional). This effort will focus on cultivating opportunities under key thematic areas: i) pollution reduction

and waste management, ii) water use and supply management, iii) habitat protection / conservation, iv) blue economy livelihoods and businesses.

183. Under Pillar 2 ADB will use the IP as an opportunity to facilitate capacity development and advisory services for key regional, national and subnational stakeholders. This will include Ocean finance frameworks that better internalize ocean finance principles within institutional operations such as national development banks and financial intermediaries. ADB will help to innovate ocean finance tools and methods such as multi-use, multi-functional spatial planning, natural capital assessments and accounting, blue bond incubator, third party risk transfer mechanisms for ecosystems services, debt for nature swaps, etc. ADB will also use the IP to facilitate links with private sector finance. Examples include: Sea Green /Asia Affinity Group, Ocean 14 Capital, David and Lucille Packard Foundation, Gordon and Betty Moore Foundation, and Bloomberg Philanthropies.

184. Under Pillar 3, ADB will support financing for investment readiness / project preparation for new generation of sustainable ocean infrastructure investments. This will build on, align and package with previous/ongoing/proposed suite of other ADB/GEF projects under "programmatic wrapping" (ADB Healthy Oceans Action Plan), including: Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security (multi-donor); Partnerships for Coral Reef Finance and Insurance in Asia and the Pacific; Towards Sustainable and Conversion-Free Aquaculture in Indonesian Seas LME; Island to Island – Pacific SIDs with UNEP; Blue Pacific Finance Hub (multi-donor); Blue Way for SMEs in Seas of East Asia - SCS and Gulf of Thailand with UNEP (proposed); Asia-Pacific Urban Chemicals and Wastes Partnership Fund (with UNIDO and UNEP) (proposed); and, the Sustainable Blue Economy Investment Plan – Gulf of Thailand.

185. The approach will encourage links to ADB operations through financing partnership facilities (FPFs) and associated Trust Funds, including Urban Financing Partnership Facility (UFPF), Water Partnership Financing Facility (WPFP), Oceans Resilience and Adaptation Financing Partnership Facility (ORCA) within ADB, or externally-managed funds, with a view to leveraging national / domestic and private sector co-finance. ADB intends to support preparation of at least 1 TA and associated loan in a priority area (to be identified) which will generate GEBs as well as a number of co-benefits, including related to sustainable livelihoods, gender equality and social inclusion ,. As noted above, an example of ADB's ongoing effort is work with the Government of Indonesia on a proposed $ 492 million "City-Wide Inclusive Sanitation Project" which will cover three coastal cities in Indonesia.

186. Under Pillar 4, ADB will build Knowledge and Learning Systems for Clean and Healthy Oceans. This will include sharing of good practice on design and implementation of infrastructure investments which address nature-positive, blue economy objectives and social sustainability. This could include support for experiential cross-learning for countries, government-industry partnerships, city twinning arrangements, 'how to guides" etc.

187. The IP under this component will help countries leverage and build capacities to capture infrastructure funding. Investment in pollution abatement is costly. The proposed GCP partners are very well-prepared to leverage substantial infrastructure funding. One major thrust of the program will be to support and identify opportunities for infrastructure funding and technical skills covering agriculture, municipal/industrial wastewater, and coastal zone conservation. This will include wastewater and irrigation investment to reduce pollutant discharge. Global and regional commitments will be accelerated while advancing new financing tools and products. This will include financial analysis to assist with life cycle and recovery costs.

188. The Global and Child Projects will showcase effective innovative financing tools and products to curb coastal pollution. The IP will build upon GCP partners' experience with innovative financing, including PPPs, blue and green bonds[100]. This will include upstream infrastructure investments and adjustments to

management practices in both sectors, combined with policy formulation to support these measures. Nutrient trading programs may be explored along with opportunities for carbon financing[101].

189. Innovations will be explored to support municipalities to develop water funds designed to comprehensively manage upstream watershed conservation, agriculture, wastewater, and cost-recovery. This can include bringing together financial savings represented by conventional pollution control systems with green infrastructure (e.g., wetlands) and/or agriculture applications. CAF, for instance, offers MOOC and NOOC courses in green and blue financing. In 2024 a new module on Ocean Health will be put in place. CAF also supports agricultural drainage management for financed irrigation projects aimed to reduce pollution to water bodies.

190. The Global and Child Projects will showcase effective innovative financing tools and products to curb coastal pollution. The IP will build upon GCP partners' experience with innovative financing, including PPPs, blue and green bonds[102]. This will include upstream infrastructure investments and adjustments to management practices in both sectors, combined with policy formulation to support these measures. Nutrient trading programs may be explored[103].

191. This will include opportunities for carbon financing. Familiarity working with agriculture, blue finance, wastewater and sewerage systems financing will inform investment and leading approaches that incentivize sustainable practices.

192. Innovations will be explored to support municipalities to develop water funds designed to comprehensively manage upstream watershed conservation, agriculture, wastewater, and cost-recovery. This can include bringing together financial savings represented by conventional pollution control systems with green infrastructure (e.g., wetlands) and/or agriculture applications.

193. Under this component, each RMDB will provide a set of services for its Development Member Country (DMC) governments; as well as child projects under the IP which are aligned with the CHO Global Platform. The RMDB will provide capacity development and advisory services on finance frameworks; internalizing sustainable finance principles within institutional operations; and innovative finance tools and methods (e.g. multi-use, multi-functional spatial planning, natural capital assessments and accounting, blue bond incubator, debt for nature swaps, etc). This will include facilitation of financing to support investment readiness and project preparation for new generation of infrastructure investments to address pollution reduction, biodiversity loss and climate change in oceans, coastal and marine sector, such as regenerative nature-based investments and blue business models. This could be through existing financing partnership facilities (FPFs) or externally-managed funds, with a view to leverage national / domestic and private sector co-finance. This will include opportunities to build on bankable investment frameworks identified in relevant LME Strategic Action Programs (SAPs) and National Action Plans (NAPs).

194. Support will be given for countries to more effectively mainstream the issue of hypoxia and point/non-point source pollutant abatement within national budgets and finance strategies. This will include development of model strategies via the GCP for inclusion, reference and uptake by select Child Projects.

195. Improved financial management for both the agriculture and wastewater sectors help lower costs associated with improved practices. Financial management capacities of private and public sector wastewater management actors will be enhanced. This will include working with utilities to support capacity building to improve "willingness to pay" structures and support for innovative tax, tariff, and/or transfer mechanisms. This includes support to design systems that are realistically scaled using dynamic simulators to emphasize cost-saving such as improved efficiency. The program will support strategic planning, professional needs assessments, public-private partnerships (PPP), performance-based contracting, and other private sector focused financing innovations.

196. The component will build policy and financing frameworks that promote the innovation, investment and adoption of regenerative and NbS practices. The finalized PFD will describe opportunities to leverage investments in nature-based solutions as low cost, flexible, locally adapted approaches that may combine with existing and/or new grey infrastructure. This will include innovative financial tools and products, building upon partner RMDB efforts.

197. Regenerative and NbS approaches will be incentivized through improved policy and financing. Each of the GCP partners have extensive expertise with technical, policy and fiscal reforms designed to incentivize investment in green technologies. Related financing and policy innovations will discourage polluting behaviors and increase investment in cost-effective bio-based and NbS alternatives. . The dominant gender dynamics and socioeconomic dimensions will be integral considerations to be factored in the design approaches to NbS . More specifically, NbS will be promoted for the wastewater sector using financial and policy adjustments. Conservation of critical coastal habitats will be mainstreamed in finance and policy reforms. This includes mangroves and salt marshes that support potential regenerative NbS and are important to securing globally significant biodiversity. Circular waste management systems for both agriculture and municipal/industrial pollution sources provide excellent opportunity to reduce pollutant discharge, realize multiple environmental co-benefits, and reduce pollution abatements costs. Pilot-testing Performance-based Incentives for Agricultural Pollution Control may provide flexible incentives to participating farmers for reducing N, P and organic matter loss from their farms. The roll-out of these initiatives will be based on socio-economic and gender assessments and aim to reinforce social welfare and GEBs in conjunction. Mangroves for the Future (MFF), an initiative co-chaired by IUCN and the United Nations Development Programme (UNDP), is running mangrove restoration and sustainable development projects with gender integration as a core strategy in several Asian countries. Participatory, community-based project approaches ensure that women's and men's voices are considered equally and aim to improve women's social and economic empowerment. Some MFF projects have supported women through sustainable livelihoods and financial leadership training which provides them with alternative livelihoods and income opportunities. For example, where women have received training on the advantages of cultivating mangrove plants, the resulting increases in fish stocks have provided an additional income opportunity. Moreover, their newly acquired financial skills have ensured higher business success.

198. Private industry, banks, and investment funds will be important stakeholders to develop and deploy innovative financial tools and products. Global engagement opportunities for private sector investors and service providers will be leveraged via The International Water Association (IWA)[104], Coalition for Private Investment in Conservation (CPIC)[105], World Business Council for Sustainable Development [106] and the CEO Water Mandate[107]. There are excellent mechanisms and examples to build upon taking public-private partnership (PPP) approaches to blended financing. These may incorporate subsidies, concessional finance, private equity, debt finance, and innovative tax and tariff approaches. Output-based aid innovations for financing may be supported (e.g. Brazil's PRODES), focused upon payments and finance linked to commercial banks based upon quality of outputs to incentivize improved plant management.

Component 3: Upscaling best management practices and investments to showcase effective solutions

Outcome: Best management practices adopted and amplified that emphasize nature-based solutions and achievement of marine hypoxia reduction targets.

Output 3.1. Establish coastal hypoxia pollution abatement training and capacity building programs targeting municipal and industrial sources in a socially inclusive manner.

Output 3.2. Identify and support priority municipal and industrial wastewater improvements that showcase inclusive best management practices, contribute to specific pollution and marine hypoxia reduction targets, and emphasize NbS.

Output 3.3. Establish nutrient pollution abatement training and capacity building programs targeting agricultural sources and involving local constituencies (gender, youth and indigenous groups) in an inclusive manner.

Output 3.4. Identify and support priority agricultural improvements that showcase best management practices, contribute to specific nutrient pollution and marine hypoxia reduction targets, and emphasize locally appropriate and socially inclusive NbS.

Output 3.5. Identify and support priority coastal zone conservation and restoration programs showcasing NbS potential to mitigate marine hypoxia.

199. Component 3 will be organized to showcase best management practices, including the potential to use nature-based solutions to cost-effectively mitigate pollution and conserve coastal ecosystem integrity. This will include innovative nutrient recycling approaches for water and waste, zero or low energy input NBS, and innovative platforms among technology and solution providers. Investments in nature-based solutions, including low cost, flexible, locally adapted and socially inclusive approaches, that may combine with existing grey infrastructure. Activities may include testing of innovative nutrient recycling tools and modalities; zero or low energy input NbS, to increase deployment in off-grid and remote settings; catalyzing deployment of decentralized NbS wastewater treatment systems, such as constructed wetlands, activated sludge systems, sand and other filter systems; and development of innovative solutions to curb different sources of wastewater.

200. Supported best management practices will be designed to provide evidence that improved management of agriculture, municipal and industrial wastewater, and coastal marine ecosystems can result in hypoxia reduction, renewed marine ecosystem health, and associated co-benefits. This will include working with research organizations, civil society including women, youth and indigenous groups, SMEs and larger private sector institutions to foster innovation. Effective technologies will be linked via awareness, monitoring and the capture of best practices for amplification. An emphasis will be upon coastal zone habitat conservation to mitigate pollution and innovative wastewater management and agricultural practices.

201. This component will likely require substantial investment, including government, donor, RMDB, and private sector support for adoption of improved practices and associated upstream infrastructure. As noted, each of the GCP partners stand ready to help mobilize required funding with substantial co-funding already identified.

202. Projects will be aligned with national strategies and promote associated policy dialogue and reforms for increased financial sustainability, through for example cost recovery tariffs. Projects in municipal environmental services with focus on wastewater treatment, storm water management and solid waste management would target beneficiaries among municipalities, regional administrations (governorates), national ministries and public companies in the target countries. Improvements in municipal services have direct and relatively quickly achieved benefits in terms of improvements to water quality in coastal areas and long-term ecosystems services benefits, leading to stronger buy in from the coastal populations and respective beneficiary countries.

203. Supported best management practices will be designed to provide evidence that improved management of agriculture, municipal and industrial wastewater, and coastal marine ecosystems can result in hypoxia reduction, renewed marine ecosystem health, and associated co-benefits, including improved

livelihoods and enhanced social sustainability. This will include working with research organizations, civil society (with gender, youth and indigenous people's representation , SMEs and larger private sector institutions to foster innovation. Effective technologies will be linked via awareness, monitoring and the capture of best practices for amplification. An emphasis will be upon coastal zone habitat conservation to mitigate pollution and innovative wastewater management and agricultural practices.

204. Nature-based and regenerative solutions are emphasized across each component as cost-effective approaches to address pollution and achieve enduring coastal conservation impacts. Investments will support ecosystem-based management and prioritize conservation of high BD value coastal areas threatened by hypoxia. This will include opportunities to conserve globally significant biodiversity and associated coastal ecosystems. The restoration and maintenance of natural habitats such as wetlands, riparian areas, and other natural barriers not only provide critical biodiversity value, they help to trap and remove excess nutrients from runoff before they reach coastal waters.

205. Investment in water resources management and wastewater infrastructure improvements is a heavy task, demanding sophisticated up-front planning. Systems are expensive to build, maintain and operate[108]. Part of the program's approach will be to help establish the capacity to efficiently and effectively identify system needs and secure financing to update, construct, and operationalize required systems. This will include supporting a non-conventional approach that more closely scrutinizes and strategically addresses sustainability and externalities. The proposed approach will help regulatory commissions and other relevant agencies address funding inadequacies, loan and financing structures, tariffs, and revenue capture to improve wastewater management. This includes centralized and decentralized systems such as individual on-lot, cluster systems, and satellite collection systems.

206. Investments in nature-based solutions will be emphasized as low cost, flexible, and locally adapted and inclusive alternatives. Models are emerging that reduce nutrient loading from urban and per urban sources, as well as other biomass processing concentration, including ports in coastal areas, by using detention basins, constructed wetlands, vegetative swales, and rain gardens. They may even be combined with existing grey infrastructure. Cost-effective wastewater treatment can be achieved before pollutants reach the ocean. This can include constructed, eco-machine or floating treatment wetlands, algal treatment systems, soil infiltration and bioretention systems, or green roofs.

207. Circular systems present opportunities for wastewater to be recycled and repurposed, often as fertilizer. Traditional wastewater "end of the pipe" treatment is energy demanding and often over-looks phosphorous[109]. Source separation systems may be upscaled to provide for recovery of organic matter, nitrogen and phosphorous from wastewater in urban, peri-urban, and rural settings[110]. Most conventional systems use "activated sludge process" or aerobic conditions with excess chemicals and energy to remove nitrogen. Innovative anaerobic circular systems have been shown to be more resource efficient, providing opportunities for energy recovery, bioenergy, energy reductions, and carbon capture[111]. These systems provide opportunity for cost recovery by selling harvested treated water, energy, nitrogen and phosphorous. Many of these approaches strengthen connectivity between agriculture and improved urban/municipal wastewater management[112].

208. Green spaces and green infrastructure using natural systems are an effective NbS to reduce urban and industrial pollutants from reaching coastal zones. The development and restoration of natural riverine areas in urban areas can reduce stress on expensive wastewater treatment facilities[113]. Green spaces, urban and peri-urban agriculture, and urban forestry can substantially mitigate urban pollution[114]. Each of these are central activities under FAO's green cities initiative[115]. The proposed GCP partners are very experienced with all aspects of wastewater management and innovative NbS approaches, particularly through emerging Citywide Inclusive Sanitation (CWIS) approaches.

209. While it is difficult to estimate the precise scale of coastal and marine tourism as a proportion of tourism overall, it is a substantial component, with WWF suggesting that 80% of all tourism takes place in coastal areas (WWF 2020). As a result, coastal and marine tourism is a significant part of the blue economy for much of the world. In Southern and Easter Mediterranean region coastal and marine tourism represents a significant source of foreign exchange, income, and livelihoods, as well as a potential source of local economic development and avenue for women's economic and social empowerment. Regardless of location, nature and biodiversity are crucial to the popularity and success of tourism. However, tourism development poses important pressures on the environment and is regarded as one of the major drivers of change of the coastal and maritime environment of the Mediterranean[116]. Moreover, tourism is particularly vulnerable to global economic shocks. This was the case in the aftermath of the 2008 global financial crisis and again through the global consequences of the Covid-19 pandemic. As a result, both to ensure the long-term viability of the sector and its resilience to external shocks and climate change, the transition towards sustainable tourism has been identified as a megatrend for the sector[117].

210. Environmentally-friendly inputs used in agricultural production and related value chains and industries can help reduce harmful residues and waste. Fertilizer use in farming often results in saturation and surplus along with inadequate measures to control pollution transport (e.g., soil, water, and vegetation management). Similar factors influence nutrient pollution associated with livestock, including poultry, and aquaculture management, that are subsectors of agriculture heavily segmented by gendered roles and opportunities.

211. The IP will support opportunities to innovate, showcase and amplify coastal zone pollution reducing agricultural practices. Nearly all are cost-effective and nature-based solutions that will result in reduced coastal zone pollution, restored coastal and freshwater ecosystems, along with substantial co-benefits to additional GEF targets[118]. There are many examples of best agricultural management practices that when properly designed reduce nutrient pollution, help restore healthy ecosystems, and promote global environmental co-benefits. Practices will be adapted to individual settings in response to economic, social, ecological, and geographic factors and build on effective gender-responsive approaches.

- Soil and water management: Spatial planning, conservation agriculture, informed crop rotation, buffer strips, reduced tillage and conservation tillage, drip and low-flow irrigation, closed system irrigation, cover crops, and biofertilizers and soil amendments that improve soil and plant health and resilience. accounting for rainfallin irrigation scheduling (i.e. using variable scheduling rather than fixed scheduling).
- Habitat conservation and/or restoration: Native vegetation buffer strips, wildlife habitat grade stabilization structures, constructed and/or restored wetlands, forest restoration and trees in croplands, grassed waterways and polluted soil and water phytoremediation and microbial remediation. Controlled drainage has been used successfully in different countries and agricultural systems to enhance water productivity and to reduce pollution. Constructed wetlands can be used remove sediments, nutrients and other pollutants from agricultural drainage systems Constructed wetlands have been shown to be effective in trapping or removing different pollutants (nutrients, sediment, coliforms, pesticides, heavy metals).
- Nutrient efficiency: Precision agriculture, integrated pest management, improved soil testing and reporting, cropping diversity, nutrient recycling, and nutrient management planning. Nutrient management, shrub rows, narrow vegetation barriers, conservation tillage, tree planting and riparian buffer strips, as well as the demonstration of integrated crop and nutrient management.
- Animal management: Optimal intensity modeling, rotational grazing, pasture management (e.g., legumes), riparian buffers, improved feed management, improved breeding, manure management strategies, organic waste re-use (e.g., on-site composting, fertilizer, biogas, etc.), closed feed/manure systems, active sludge and/or sand filtration systems. Provision of incentives to

organizations and individual households for the installation of improved manure storage facilities and equipment for manure collection and application. Livestock waste nutrient management systems. Using rotational grazing, avoiding overgrazing, minimizing pasturing on steep slopes, and protecting streambanks from riverine degradation.

- Aquaculture: Spatial management, strategic/precise feed management, restorative aquaculture, macroalgal and bivalve aquaculture, aquaponics, integrated multi-trophic aquaculture (IMTA)[119], Aquaponics combined with aquaculture for wastewater treatment., and closed systems and/or systems that treat effluent[120]. Aquaculture applied wisely and sustainably relies on alternative resources for the fisheries sector, which decreases the pressure and sustains the prevalence of natural fish stock. On the other hand, the locations where aquaculture is sited are usually prime nursery, shelter and feeding grounds for marine species, many of which are also important for sustaining biodiversity as well as commercial fisheries. Inadequately operated aquaculture sites may cause depletion of wild fish stocks used in feed, disease, parasites, and chemical release and competition with other species and interbreeding from escapes. Elements of solutions of "good" aquaculture include production system design taking into account environmental constraints, monitored and controlled feeding practices, installation of up-to-date cleaning and sanitation techniques, and facility biosecurity measures to contain risks of escapes as minimum.

212. The challenges to uptake of sustainable, best management practices are generally financial, policy, and/or knowledge constraints, often segmented along gendered lines. There is often a need to demonstrate improved practices in-situ so that producers, financiers, and government agencies understand the economic, social, and environmental benefits of adopting improved practices and nature-based solutions[121]. There is a need to link practice with policy and monitoring, particularly target setting and monitoring for nutrient reductions that reflect multiple point and non-point sources and cumulative impacts scaled at least to the watershed level.

213. By leveraging this expertise, FAO is well-positioned to ensure that the solutions it develops are both inclusive and effective for smallholder farmers. This is particularly important given that smallholder farmers manage 80% of the farmland in sub-Saharan Africa and Asia, according to FAO's 2021 report. Importantly globally, 36 percent of working women are employed in agrifood systems as of 2019, Agrifood systems are a more important source of livelihood for women than for men in many countries, requiring dedicated focus and gender-responsive approaches to achieve sustainable and equitable results. For instance, in sub-Saharan Africa, 66 percent of women's employment is in agrifood systems, compared with 60 percent of men's employment. In southern Asia, 71 percent of women in the labour force work in agrifood systems versus 47 percent of men[122]. As the lead of the Global Environment Facility's Food Systems Integrated Program (GEF FS-IP), FAO is able to coordinate actions and ensure that policies and initiatives in different areas are aligned. By doing so, FAO can help to address the complex and interconnected challenges that arise in the areas of land use, agriculture, and aquaculture.

214. The program will contribute to coastal zone conservation and restoration as a pollution reduction tactic. Relying upon coastal habitats to solve upstream pollution issues is not a solution, but it can be part of a strategy that leads to a solution. If properly conceived, coastal conservation actions can help to mitigate pollution from wastewater and agricultural sources while maintain simultaneously protecting and restoring healthy coastal ecosystems resulting in substantial social, economic, and environmental co-benefits.

215. Maintaining and restoring critical habitats such as seagrass meadows, salt marsh, coral reefs, oyster reefs, mangrove forests and salt-marshes can help reduce nutrients and nutrient transport, increase sequestration of organic matter in benthic sediment, and conserve globally significant biodiversity[123]. FAO is a leader in such approaches and is currently developing a global mariculture proposal/strategy to apply

these models to support nutrient pollution reduction. Shoreline erosion management can reduce sedimentation and pollutants from reaching the sea. Harbor and ship waste management controls and improved practices can reduce nutrient discharges.

216. Coastal erosion is a major issue along some shorelines of the Mediterranean Sea. Increasing use of freshwater from river inshore for water supply and agriculture means that the quantity of freshwater reaching the Mediterranean is decreasing. This reduces the amount of alluvion reaching the sea which in the past this had played an important role to protect the shorelines from erosion. In addition, coastal erosion can cause greater seawater intrusion into groundwater in coastal areas creating negative impacts on agriculture, tourism, fisheries, and more.

217. There are clear benefits from land-ocean system integration, including: An expanded system boundary will pave the way for new incentive mechanisms to scale biofiltering/nutrient stripping for recycling of valuable nutrients from the marine environment via shellfish and seaweed zoned areas and back into the production sectors as valuable feed, food and material resources. Strengthened ocean governance and spatial planning in support of national and transboundary priorities, and advancement of lower trophic level mariculture value chains can support coastal and open ocean restoration and improved or restored ecosystem service functions and, expansion and incorporation of nature positive food and material production into larger marine restoration initiatives will have direct and secondary employment potential offering livelihoods and decent work employment opportunities for coastal populations and labor displaced from agriculture and capture fisheries.

218. Organic matter by-products from agricultural and industrial processes can help improve the health of agricultural soils by re-cycling nutrients and contributing organic carbon, all while reducing pollution associated with waste disposal. These circular processes rely upon soil microorganisms, which perform activities that are essential for healthy soil functioning. Leveraging their enormous genetic diversity and associated functions is an opportunity to maintain and restore soil health, while offering a profitable business opportunity for the farming community or cutting costs to purchase fertilizer. This is an entry point in a sector where women farmers are already underserved and could be effective stakeholders in a switch to sustainable practices with dedicated capacity development and incentives. Second, biological treatment processes, also known as bioremediation, can contribute to wetland and freshwater restoration. Bioremediation is the process of treating and detoxifying environmental contaminants in soil, water or other environments, such as petroleum hydrocarbons, by taking advantage of natural biological processes. This can be done using plants (phytoremediation), microbes (biostimulation), fungi (mycoremediation) or even animals such as fish (biomanipulation).

B1.4 Child Project Alignment and Contribution to Programmatic Impact

219. For full details, please see the Child Concept Notes attached.

220. Each of the approved Child Projects is fully aligned with and will contribute to the Programmatic Impact. The submitted CNs follow the causal reasoning including transformational levers, core components, and key activities as described in the EOI, GCP, and PFD. During the PPG phase, the GCP will work with each of the Child Projects individually and as a cohort to further make certain that the entire package is aligned to efficiently and effectively deliver as intended and contributing fully to programmatic impact.

221. Each of the approved child projects fully demonstrate the potential to deliver significant GEBs with a programmatic approach, including complementarity and additionality performance. Child projects were selected using science-based evidence and prioritized based upon global ocean health needs. The inputs of the IOC were invaluable in this regard.

222. Each project contributes appreciably to core indicator targets. This includes commitment to the overall goals of the IP coordination and outreach project detailed in the final proposal to be agreed with GEF. Linkages between a suite of 'co-benefits' associated with coastal zone pollution abatement and local healthy blue economies are emphasized.

223. Each child project shows substantial co-financing potential, including private and financial sector investments, along with commitment to each of the four levers for transformation (governance and policy, financing, innovation and dialogue). Each of the IPs Child Projects are within the direct sphere of partner RMDBs, providing an opportunity for a strategic pipeline of investments and enduring capacity support tailored to reduce nutrient pollution at scale. The Caribbean in particular presents opportunities to engage SIDS.

224. All child projects will be expected to contribute to and engage with regional and global learning, contributing to platforms, building a resource information base, best management practice archive, strengthening scientific monitoring, and early warning systems established by the GCP that link nutrient pollution and coastal conservation issues at global, LME, and national levels. Projections of river nutrient export to rivers and oceans may be strengthened, including traceability and attribution, to better monitor impacts and design strategic and targeted responses.

225. Each child project will advance systems transformation, meaningfully contribute to GEBs, integrate cross-cutting themes and levers for transformation, and fully commit to engage with the coordination platform. All projects will share fundamental concepts integrated within their design and linked across the entire IP such as contributions to awareness building and science-based decision making designed to enhance collaborative and coordinated knowledge management and information sharing at scale. Government, civil society, and private sector actors at all levels will be provided with the knowledge, tools and dialog opportunities required to mainstream hypoxia concerns within their decision-making structures. Child projects will offer innovation, showing creative ways to solve coastal zone pollution to advance global solutions well beyond business as usual.

226. The Child Projects reflect Source to Sea linkages between water pollution, river basins, and LMEs as detailed by GEF STAP[124] River basins and watersheds are used to organize and strategically focus investment and action to provide stronger geographic continuity and the ability to improve impact monitoring of point and non-point pollution sources, prioritize planning, target setting, and monitoring. This includes ensuring that all interventions are an integral part of overarching water policy frameworks at river basin scale.

227. Emerging experience is showing that coastal ecosystem benefits are enhanced when investments in circular systems are linked to integrated river basin planning and/or coastal zone planning. National capital safeguarding is highlighted as a unifying principle and a stakeholder community (with a whole-of-society approach)will be constructed to reflect the pathways connecting land-based activities to coastal resources.

228. Finalized target locations evince high hypoxia risks while aligning with opportunities to showcase measurable and enduring nutrient pollution reductions, recognizing that there is IP value in assisting LMEs pre-emptively avoid moving to higher risk categories. Informed by best available science, the IP focuses upon several high risk LMEs and targets primary nutrient pollution contributors with a suite of strategic interventions. The IP will globally advance proactive knowledge, political engagement, and financial support. The approach will be inclusive, making certain that LMEs currently experiencing high levels of hypoxia as well as those LMEs projected to have increased levels of hypoxia risk benefit from IP actions. These regions present a diversity of land-based pollution challenges, offering prospects to showcase tailored interventions. These LMEs have firm baselines upon which to build additionality.

229. Each child project represents challenges to be addressed and offers evident prospects to successfully demonstrate effective achievement of and contributions to the overall IP goal. Locations offer opportunities for GEBs and co-benefits, including ecosystem based management that targets conservation of critical and sensitive habitats, conservation of globally significant biodiversity, and improved livelihoods, food security, and climate change resilience. Locations will be highlighted in part through consultation with IOC and the GO2NE working group.

230. The Child Projects will each contribute to Kunming-Montreal Global Biodiversity Framework (GBF) targets, particularly Targets 2 and 3 (inland/marine ecosystem restoration), Target 7 (pollution reduction), Target 10 (sustainable agriculture), Target 11 (disease reduction) and Target 12 (sustainable urban and densely populated areas) and Target 23 (promoting gender-responsive approaches.

231. The Child Projects directly contribute to GEF's "Healthy Planet, Healthy People" framework. The IP is designed to emphasize the interdependency between human well-being and a healthy environment. The IP will seek out ecosystem-based solutions recognizing the interdependence of humans, wildlife, and the environment with targeted investments designed to generate global environmental benefits while creating innovative pathways for transforming these systems toward durability and resilience. The IP will directly result in cleaner and healthier urban and rural landscapes, including the reduction of pathogens associated with agricultural and urban waste. The IP will help drive greater ecosystem integrity which will improve resilience and increase local livelihood prospects in a socially inclusive manner.

232. Each national Child Project is fully aligned with and adequately reflects the Program Objective and priorities as described in the TOC while presenting a strong incremental reasoning. Following is a brief table highlighting this information. Please see the approved Concept Notes attached as Annex H for additional detail. Further analysis and information will be available during the PPG.

Country	Brief Description of Child Project alignment with Program Objective and Presentation of Incremental Reasoning
Grenada	Given Grenada's current lack of infrastructure and integrated processes for waste management and in particular wastewater treatment, the proposed project will fill a gap that has long been identified in various plans. Without GEF support this work will not occur, as it has been difficult for Grenada to prioritize these efforts with their limited budget. The project will include three components: 1) Solid waste management awareness; 2) Wastewater treatment; and 3) Knowledge management and Monitoring and Evaluation. Component 1: The outcome will be improved national and regional awareness and understanding of waste management. This will include developing and implementing a national awareness campaign on the impacts of pollution (campaigns will be gender sensitive). It will also improve engagement with the private sector (particularly tourism) to support pollution monitoring and enforcement. Component 2: The project will identify and address climate change risks to the treatment of waste management; and improve the management of grey/blackwater. A comprehensive environmental impact assessment will be undertaken, factoring in disasters and climate change risks, and criteria will be developed for wastewater storage site selection. Policies related to wastewater storage and treatment will be reviewed and regulations relating to the discharge of grey and black water will be strengthened. This will also seek to improve the management of grey/blackwater through updating and consolidating a database, including the location (using GIS data), status and condition of all formal and informal grey/black water outfalls – a task which may require a technology needs assessment related to climate change. Benchmarks for water quality will also be established through periodic testing of water sources for various water quality parameters including bacterial contaminants. And a test management plan for grey/black water treatment will be piloted. Finally, the project will investigate and implement innovative ways to reuse greywater for irrigation related to agriculture and landscaping. Component 3: The project will identify and utilize a gender sensitive knowledge management system that shares the information generated from the project and a working M&E system to monitor, adapt and learn from the project implementation. The project team will also utilize already existing systems for sharing information, such as IW:Learn and the Integrated Water and Wastewater Management (IWWM) data platform.
Jordan	The proposed project takes a systemic approach and uses Aqaba Bay as a biophysical unit of a system, while considering socio-economic pressures and flows as positive and negative feedback loops affecting the biophysical unit of the Bay.

	Project objective: To address hypoxic zones by curbing coastal pollution through policy and regulatory measures and infrastructure investments combined with nature-based solutions. Component 1 intends to focus on build awareness and understanding designed to stimulate action and inform decision-making designed to reduce nutrient pollution and hypoxia. This will include building awareness while tapping into the EBRD experience and the CHO alliance. Component 2 intends to support the emplacement of policy and financing structures designed to incentivize adoption of pollution mitigation practices that target hypoxia alleviation, identified as opportunities within the investment project context. Effort could inform coordinated policy formulation processes that link policy reforms with needed financing and implementation on the ground. policy and regulatory reforms that can enhance cross-sectoral coordination and coherent policy and regulatory instruments, incentivize investments in areas such as pollution prevention, water management and build awareness and alliances across neighboring countries. The component will contribute to building capacities to capture and manage substantial infrastructure funding, particularly in relation to desalination and solid waste management initially and could be expanded to agriculture and tourism sectors. The component will build policy and financing frameworks that promote the innovation, investment, and adoption of regenerative and NbS practices. Component 3 intends to showcase best management practices, including the potential to use nature-based solutions to cost-effectively mitigate pollution and conserve coastal ecosystem health. This could include innovative pollutant capturing, desalination brine management, and nutrient recycling approaches for water and waste and zero or low energy input NBS, and innovative platforms among technology and solution providers. Investments in nature-based solutions, including low cost, flexible, locally adapted and gender-responsive approaches that may combine with existing grey infrastructure. Activities may include collecting and sharing best practice for testing of innovative nutrient recycling tools and modalities; NBS for solid waste management involve using natural processes and ecosystems to help manage and treat waste (such as composting, anaerobic digestion, biofiltration, phytoremediation, bioenergy from waste, algae-based systems, etc.), NbS, to increase deployment in off-grid and remote settings; catalyzing deployment of decentralized NbS wastewater treatment systems, such as constructed wetlands, activated sludge systems, sand and other filter systems, and co-composting.
Madagascar	The project will draw from experience with existing frameworks and propose to develop financial innovation and stakeholder engagement that can contribute to IP objectives. Project will mobilize other sources of funding as tools for scaling up, either through existing cities networks, or through direct (including private sector) mobilization using an ad hoc working group under the Ministry of Environment. The proposed child project aims at restoring upstream and marine ecosystems and maintaining the quality of marine ecosystems by reducing the pollution caused by various types of waste in critical watersheds and coastal areas of southern regions of Madagascar. Outcome 1: Strengthened strategic, regulatory and institutional frameworks, for pollution reduction through pollution management strategy, waste management framework regulatory tools, and financial incentives The project will develop/update pollution management strategy, regulatory tools and establish standards for each type of pollution (Physical pollution, Organic and microbiological pollution, Chemical and mineral pollution), including through technical and institutional capacity building of public institutions in charge of pollution management, farmers, fisherfolk, MSME/I and private sector. This will include the identification of financing mechanisms for the sustainability and replicability of the interventions and the application of the pollution management strategy. This will be led by an ad hoc working group that will work on financing innovation and mobilization (ie. Madagascar is in the process of setting up taxes, especially on marine pollution innovations that this project, through the Ministry of the Environment will closely monitor). Target cities will be supported to participate to relevant global platforms to attract additional funding from the private sector, enable civil society to access a network of partners, thereby preparing for the scaling up of interventions in other areas and regions of the country in collaboration with government and financial partners. The component also proposes to establish knowledge sharing platforms for private sector, civil society and local population interventions regarding pollution management. The objective of these platforms is to develop ownership, mitigate waste production and operationalize equipment and tools acquired as part of the project. The project aims to develop integrated, socially inclusive and gender-transformative communication and knowledge sharing tools targeting all stakeholders in the exploitation of upstream and downstream marine areas. Outcome 2: Reduction of physical pollution due to erosion of rivers and deforestation, by restoring natural ecosystems and ecological balance. This Outcome supports the operationalization of the strategic frameworks corresponding to the reduction of physical pollutions, in line with the existing priorities and those identified under outcome 1. The outcome will reduce physical pollution resulting from deforestation and land degradation in marine ecosystems through ecological restoration of key ecosystems such as forests and mangroves, strengthening of effective conservation measures of community-led protected areas (including infrastructure, equipment, human resources), and fight against invasive species. The outcome will also encourage local population, the private sector and civil society to actively engage in reducing physical pollution through the identification, development and operationalization of sustainable and inclusive value chains to improve the livelihoods of local population. In particular, this outcome will support i) the diversification of sustainable, resilient and environment-friendly farming value chains increasingly targeting national pollution free and net zero objectives, ii) the promotion of climate-smart agricultural practices, consistent with the principles of agroecology, including clean energy through reuse of waste from agriculture and green supply chains such as compost production and bio pesticides, iii) reducing risks to pollution and degradation of ecosystem to the population and fragile ecosystems, v) improving inclusiveness by promoting small and medium scale industry and ecological agriculture that can be practiced the most vulnerable, and vi) capacity building of decentralized technical services and farmers to promote the adoption and dissemination of pollution free solutions in target sites and across the country. Outcome 3: Establishment of sustainable waste management value chains through the setting of sound infrastructures that reduce organic and microbiological pollution and This outcome will support the establishment of sanitation infrastructure to respond to the reduction of beach defecation, widespread in Southern Madagascar, and contributing to nutrient overload, locally favoring earlier and longer red algae bloom associated with poisoning due to the consumption of marine animals. Sanitation infrastructure will also reduce the spread of pathogens and morbidity from water-borne

	diseases. Special attention will be given to mitigate the incidence of water-borne diseases that arehigher among women and children due to their responsibilities in water collection and domestic activities. This intervention is fully aligned with the global One Health vision. The outcome 3 will also improve waste sorting and collection centers in two targeted urban centers prioritized under the CDN2 (2022): Toliara and Tôlagnaro. In 2022, these cities produced respectively 80,000 tonnes and 50,000 tonnes of waste per day, totaling 22 Gg CO2 eq per year or 10% of annual GHG emissions from the Waste sector (BNCC REDD+, unpublished data). The Ministry of Environment and Sustainable Development has created waste sorting and collection facilities in a few pilot cities and this outcome will finance the operationalization of these facilities, in collaboration with existing private sector, including MadaCompost and GEVALOR. Feasibility studies will be conducted, considering liquid and solid waste categorization and will cover industrial effluent management program for slaughterhouses in urban centers; energy recovery from latrine sludge; mechanical-biological treatments of household solid waste. The main and derived products from these activities will enter new value chains in collaboration with the agriculture, crafts and industry ministries. Outcome 4: Reduction of chemical and mineral pollution Under this outcome, the project will support the agriculture sector by introducing sustainable and non-harmful hydro-agricultural practices and secured water storage infrastructure, and develop sustainable and non-polluting agricultural value chains and marketing networks involving producer groups and private sector stakeholders. Under this outcome, the project will also identify existing sources of industrial pollutants in the two watersheds (including from ships, ports and factories), the identification of BAT/BEP/RECP corresponding to the pollutant sources and factories, the design of management protocols for each pollutant source, and the implementation of BAT/BEP/RECP for each pollutant source and industrial factories.
Maldives	Based on recent global investment by GEF/UNEP through INMS, as substantial knowledge base and innovative thinking has been developed that now needs to be tested in practice. The selection of the Maldives as a first case study of the approach draws on its successful contribution to SANH, where a South Asia Community of Practice has been developed, with major experimental, modelling, solutions and policy outcomes, which now need to be exploited to the full. The GEF incremental financing therefore looks to capitalize on these developments, including the concept of Maldives as a "SIDS regional catalyst", simultaneously catalyzing further lessons sharing across South Asia and for other SIDS globally. The substantial co-financing from Maldives Government, academic, business and civil society partners is harnessed by this child project, both looking to make planned investment more effective and to amplify/accelerate further investment by mobilizing the NitroFinance approach. Project Objective: To reduce the amount of nitrogen pollution in the Maldives marine environment through sustainable nitrogen management, promoting recovery of existing nutrient resources, improving economy-wide nitrogen use efficiency and reducing nitrogen waste, as a contribution to protecting vulnerable marine ecosystems, while delivering multiple co-benefits for environment (water, air, climate, biodiversity, soils), health and economy. Component 1: Strengthening of national and international policies for sustainable nitrogen management (SNM), contributing to a clean and healthy ocean, with multiple co-benefits. The approach adds substantial added value for multiple outcomes. Component 2: Adoption of sustainable nitrogen management practices. By addressing integrative solutions, including both production and consumption across sectors, with strong stakeholder involvement, and investment, more acceptable solutions will be mobilized, and amplified investment beyond the GEF increment (i.e. towards NitroFinance) targeted wisely. Island councils and Island Women Development Committees, established bodies which would be utilized to mobilize awareness raising and consultation on problems, approaches and solutions, including to inform prioritization of specific investment interventions. Component 3: Nitrogen education across school, university and continuous professional development (CPD). This is a core foundation for mobilizing awareness and willingness for action, including change in policies and adoption of practices, often hindered by gender inequality barriers. Component 4: Capacity building for quantitative assessment, demonstration and mobilization. A sound knowledge foundation informs all aspects, and is essential to catalyze longer term investment in monitoring, as well as inform priority setting, including through Transboundary Diagnostic Analysis (TDA – SAP).
Mexico	The business-as-usual scenario entails degradation, eutrophication, and hypoxia in critical LMEs, leading to livelihood and environmental function loss for IPLCs and rural actors. GEF financing is vital for a transformative shift, enabling a nationally coordinated effort to address industrial, municipal, and agricultural runoff into coastal zones at various scales. This aligns with CHO IP's ToC. Mexico's project aligns with CHO IP's goals by addressing coastal pollution from agricultural runoff, municipal wastewater, and industrial water pollution. The strategy involves enhancing governance, policy coherence, infrastructure, and implementing NbS. Component 1 (aligned with Components 1 and 2 of the CHO-IP) focuses on an enabling environment for integrated watershed management, policy alignment at different governance levels, and cross-sectoral coherence. Component 2 (aligned with Component 3 of the CHO-IP) aims to enhance investments in specific watersheds by empowering producers and IPLCs. This includes employing cost-effective, eco-friendly technologies for rural water treatment and upgrading conventional methods for municipal and industrial waste and wastewater management. It also encompasses ecosystem conservation and restoration initiatives in watershed areas. By reducing untreated wastewater discharge into coastal areas, the project aims to boost biodiversity in coastal wetlands and lagoons, fostering local livelihoods and enhancing coastal ecosystem integrity and resilience.

	Component 3 (aligned with Component 2 of the CHO-IP) emphasizes fostering public-private partnerships to create sustainable financial instruments and expand NbS within the CIIT's influence areas. Key stakeholders such as private foundations, development banks, and civil society organizations including women, youth and indigenous groups will be invited to join the Inter-Institutional Coalition and provide co-financing, leveraging the catalytic nature of GEF investments. Component 4 (aligned with Component 1 of the CHO-IP) contributes to the CHO IP's global coordination function, strengthening national, regional, and global resource bases resource bases through active participation in GEF's Global Network on Ocean's Health and Ocean's Economy. The project's concerted approach seeks to drive transformative changes promoting collaboration at various levels for the sustainability of LMEs.
Moldova	Without GEF interventions, Moldova's ability to develop new economic sectors would be reduced, limiting income opportunities and the socioeconomic prospects of the communities living near the Dniester River. Additionally, nutrient pollution would persist, leading to deteriorating water quality in the Dniester and the wider Black Sea Region. This would have several adverse consequences, including: hinderance to the development of a sustainable blue economy, particularly in sectors like aquaculture and tourism; Impairment of trade due to the declining quality of the Dniester River, a vital trading route for Moldova; Increased financial burdens on governments and businesses for maintaining a clean water supply; Adverse impacts on public health in Moldova and Ukraine due to the consumption of contaminated water; and Escalation of environmental pressures in the Black Sea region due to the continued inflow of polluted water. The proposed Project Development object is to "enhance Moldova's capacity to combat nutrient pollution through ecosystem restoration in the Dniester River Basin. To achieve this, the project will focus on the following outcomes and outputs: Component 1: Institutional Capacity Building and Policy Harmonization 1.1: Development of an integrated policy framework that harmonizes existing policies and regulations for effective nutrient pollution reduction and coastal ecosystem restoration. 1.2: Training programs for government officials and local authorities on best practices in nutrient pollution management, ecosystem restoration and sustainable agriculture. 1.3: Establishment of a comprehensive regulatory framework and enforcement mechanisms to monitor and ensure compliance with pollution control measures. Component 2: Landscape Restoration, Watershed Management, and Nature-Based Solutions (NbS) 2.1: Development of comprehensive ecosystems restoration plans, using NbS, including afforestation, reforestation, and wetland restoration strategies, targeting critical pollution source areas. 2.2: Implementation of the ecosystem restoration plan focusing on agro-forestry practices and innovative NbS for nutrient pollution reduction. 2.3: Implementation of a robust monitoring and evaluation system to track the effectiveness of landscape restoration and NbS interventions in reduction nutrient pollution and enhancing ecosystem health. Component 3: Project Management This component aims to ensure the project's efficiency and efficacy through the establishment of a satisfactory monitoring and management system as well as the maintenance of the project's socially inclusive participation and consultation mechanisms. This component will support the project executing entity in charge of the technical implementation, financial management and procurement, overall monitoring of project results, production of progress reports, and safeguards compliance.
Panama	The project´s main added value is linking environmental issues with productive activities and leveraging existing management platforms and sustainable processes that are not traditionally used. The subsequent decrease of pressures from land-based sources in critical agricultural areas will contribute to preventing hypoxia in the LME. Additionally, a strengthening framework on hypoxia prevention will be developed. This proposal aims to develop a replicable integrated landscape management model focused on prioritized watersheds of Parita Bay to reduce water contamination and coastal pollution while increasing key biodiversity in the area. The low water quality of Parita Bay watersheds jeopardizes people's health, increases treatment costs[125], and its pollutants affect downstream coastal ecosystems, causing eutrophication and other damages. The GEBs[126] expected include the landscape areas under improved practices (up to 600 ha.) and the ecosystems areas under restoration (up to 43 ha). The incremental costs of the project concern the implementation of pilot NbS (e.g., agroecology systems and mangrove restoration) through landscape management plans co-created with landowners, local communities, and watershed committees, and a long-term community monitoring system. The proposed project will build on ongoing projects and complementary activities and geographic reach such as: i) Technical cooperation BNH supported by UK/IDB (2.3MUS$); ii) Sustainable and Inclusive Agricultural Innovation (41MUS$ IDB loan to MIDA and IDIAP); iii) IDB Technical cooperation Enhancing the transition towards sustainable agriculture in Central America (2.9MUS$); iv) Project Blockchain and Precision: Innovating with farmers in the rice chain in Panama (0.57MUS$). Interventions under this project will have the potential to be replicated nationally and regionally.

	This project aligns with the Program's ToC of addressing hypoxic zones by curbing coastal pollution through policy and regulatory measures and infrastructure investments combined with nature-based solutions as it aims to tackle nutrient pollution from high-input agriculture in Panama, where merged nutrient risk can potentially increase in the future. We propose addressing barriers related to lack of knowledge and awareness about hypoxia and root causes from agriculture production, low enforcement of policies, limited access to BMP options, inadequate planning, and lack of financial incentives. This will accelerate dialogue, collaborative and informed solutions as expected from Child Projects under this IP. Under component I of the IP, a GIS analysis and environmental and social baseline will be conducted in priority watersheds for science-based decision-making that will inform landscape planning and implementation of BMPs and restoration. The project will work with watershed committees, as the social and organizational unit in each watershed, improving their governance by strengthening coordination mechanisms, building farmers' associations and protected area managers' capacity to protect watersheds and decrease nutrient input. It will work alongside key stakeholders to create a portfolio of BMPs that supports biodiversity, reduces chemical input, and boosts productivity, promoting sustainable AES. The resulting practices will be outlined in playbooks to guide farmers and agricultural technicians to implement BMPs through a participatory and gender-responsive land-use planning process. The playbooks will be disseminated through a train the trainers' program to empower landowners to become effective trainers who can disseminate, and replicate practices outlined in the playbooks, displaying practices in demonstration farms and creating community plant nurseries to restore key areas of riparian habitat in watersheds and mangroves in the coast. Under component II, proposed activities include the creation of a coordination mechanism, including multi-level (from local to national) and multi-stakeholder approaches to align national policies, inform decision making, improve development plans, and implement and scale NbS that will include mangrove restoration and financial and technical support to small farmers to implement Agroecological Systems AES, and develop financial incentives for farmers to adopt AES. Additionally, the project will contribute to developing and strengthening a framework on hypoxia. Regarding component III of the IP, the project will develop a communication and outreach program to raise awareness about hypoxic zones, Nature Based Solutions (NbS) and BMPs. A community-based monitoring system will be set up to compare posterior measurements with baseline data and evaluate impacts of sustainable practices in the medium term.
Peru	The current state of pollution, eutrophication, and hypoxia in the prioritized areas may lead to critical levels of degradation, reducing their capacity to provide local and global benefits, increasing socio-environmental conflicts, and affecting the broader GEMCH. While Peru has a political, regulatory, and investment framework that contributes to and demonstrates its commitment, it still needs support to effectively address the root causes of this situation. Hence, the support of the GEF (CHO IP) is crucial in achieving the goal of reducing pollution from fishing, industrial, and municipal sources leading to hypoxia in two priority areas of the LME in Peru, through ecosystem recovery using NBS. This financing would allow the achievement of the following components Peru will contribute to the CHO IP's objective through the following means: Component 1: Governance and public policies will be strengthened with management tools, local capacities, and awareness regarding NBS. This will reduce pollution and disaster risks (as an indirect impact). Additionally, legal protection of priority areas will be enhanced through conservation mechanisms (e.g., Protected Natural Areas or Other effective area-based conservation measures). The knowledge and roles of producers and local stakeholders including women, youth and indigenous groups in maintaining ecosystem services will gain recognition from the government and scientific institutions. This complements the recovery of priority areas and the implementation of their management plans by improving participatory and co-management bodies like CAM, CAR, COMUMA, among others. This contribution aligns with Component 1 of the IP, particularly in terms of urgent collaboration, strategic action, adaptive management based on science and local knowledge, stakeholder dialogue, governance forums, awareness, data collection and exchange, and systematic dissemination of best practices. Component 2: Prioritized coastal ecosystems will be rehabilitated with NBS. This entails initiating biological research and establishing baseline data, identifying and characterizing pollution sources, and implementing pollution-reducing actions. These actions include bioremediation pilots (using artificial reefs, macroalgae, and other benthic species) and wetland recovery projects. Additionally, there will be initiatives for utilizing invasive species (Caulerpa filiformis), transforming waste into biofertilizers, silage, fish compost, etc., and promoting sustainable practices in primary activities (fishing, aquaculture, tourism, etc.). This contribution aligns with Component 3 of the IP by developing practical experiences, achieving milestones and lessons learned, enhancing capacities, encouraging adoption, and ensuring the scaling and sustainability of NBS that mitigate pollution and reduce hypoxia. Component 3: Mechanisms ensuring the financial sustainability of NBS will be improved through partnerships involving local communities, NGOs, academic institutions, and multilaterals. Feasibility studies and necessary adaptations of existing mechanisms will be considered, such as developing the financing plan for biodiversity management instruments associated with public budgets and green financing. Moreover, work will be done to improve or establish public-private partnerships, payments for ecosystem services, blue carbon markets, public budgets, environmental funds, and community financing. This contribution aligns with Component 2 of the IP, providing technical and capacity support for establishing transformative actions aligned with financing frameworks and investment guidelines that support NBS.

	Component 4: Knowledge management, project monitoring, and evaluation will be ensured. This includes establishing and/or strengthening participatory environmental quality monitoring committees. Additionally, beneficiaries of the project will be identified, prioritized, and tracked to ensure equity, gender-responsiveness focus, and intersectionality. Results will be disseminated through local, national, and GEF platforms like IWlearn. Direct contributions will be made to Component 1 and 4 of the IP by monitoring hypoxia (causes/contributors, scale, impacts, solutions, etc.) linked to understanding the project/program's impact and co-benefits. Thus, the project aligns with the CHO IP's theory of change, creating a virtuous cycle by strengthening capacities and awareness. This enables the development of policies, instruments, and NBS experiences with greater impact and sustainability, as well as financing mechanisms, which, in turn, influence the commitment to scale up these efforts.
Sri Lanka	GEF financing is critically important to this project. In order to increase understanding and monitoring of point and non-point source agricultural pollution and levels of marine hypoxia; implement best management practices for agriculture and aquaculture; and hence reduce the levels of land-derived nutrient pollution in Sri Lanka being discharged into the BOBLME. The objective of the project is to reduce eutrophication-induced hypoxia in the BOBLME, by curbing land-based agricultural pollution in north-west Sri Lanka. It will address levels of nutrient rich pollution from agriculture, with a focus on irrigated paddy and aquaculture (shrimp farms), based on a solid gender analysis. 1. Awareness and understanding for science-based decision-making and action. • Increase scientific understanding of point and non-point agricultural pollution sources in the Kala Oya and Mee Oya river basins, discharging at the North Western Province coast. • Examine and reduce levels of chemical leasing from paddy. • Initiate and update science-based modelling of nutrient flows in land and water systems. • Examine and improve land-use management practices at sub catchment level, with the aid of modelling. • Science-to-policy approaches • Support integrated water resource planning and management. • Increase stakeholder awareness of causes and consequences of nutrient pollution. • Training and capacity-building initiatives focused on agricultural practices. • Establish networks for monitoring agricultural pollution. Early warning systems and information exchange. Consider climate change impacts on pollution. • Leverage bioeconomy solutions. 2. Policy and financing structures • Strengthen inter-sector and intra-sector coordination of policies, strategies, regulations and investments. • Establish inter-agency task force on land-based nutrient pollution. • Innovative financial instruments, subsidies and incentives. • Strengthen regulatory framework. • Developing a bioeconomy policy framework and financing mechanisms. • Pilot subsidies and incentives. 3. Best management practices • Implement Best Management Practices. Including for chemical leasing from paddy and aquaculture (shrimp farms). • Implement socially inclusive Nature-based Solutions (NbS) and bioeconomy solutions. • Optimization of fertilizer rate and timing to crops with NbS approach.

	• Provision of technical guidance. • Pilots of technical options for reducing pollution (paddy and shrimp farms).
St. Kitts and Nevis	This project directly addresses a major gap towards developing a Blue-Green Economy, that of waste management. By improving the data collection and monitoring, while also reducing land-based sources for pollution, St. Kitts and Nevis can protect the globally significant wildlife that frequent their beaches and protect the coral reefs and general ocean health. Without GEF support this work will not occur, as it has been difficult for St. Kitts and Nevis to prioritize these efforts with limited budget. The project intends to grow the Blue-Green Economy of SKN by reducing threats to marine ecosystems. To achieve this, the economic value of the ecosystem services provided must be demonstrable. The project has three components, 1) Data collection and monitoring; 2) Solutions and policies, and 3) Knowledge management and monitoring and evaluation. Component 1 aims to improve monitoring and data collection by developing and implementing a coastal and marine habitat monitoring system; a carrying capacity assessment for dive sites; and an ecosystem-based services assessment. Component 2 has two outcomes: Nature-based and structural solutions to reduce runoff are implemented; and Strengthened policies and capacities reduce pollution and improve management of natural resources. Activities: improving management of used water discharges and pollution reduction; installing barriers to trap sediment runoff; developing a coastal and marine habitat management and sustainable finance plan; restoring critical ecosystems; recommendations for Marine Management Areas policy instruments; recommendations to strengthen regulation of land-based sources of pollution; updating zoning ordinance for Nevis; and strengthen collaboration and coordination between agencies and actors, and other civil society (including women's groups) and private sector stakeholders. Outcome 3 will ensure functional, gender-sensitive M&E and knowledge management systems are utilized. Activities: Development of a gender-sensitive M&E system and knowledge management system will be tested and revised with stakeholder feedback. The project will utilize existing systems for sharing information, such as IW:Learn and the Integrated Water and Wastewater Management (IWWM) data platform. This component will ensure that lessons learned, and materials developed are made widely available. The project will also engage with the IP to share information and exchange learning.
Thailand	The project envisions holistically reducing nutrients pollution from source to sea in Thailand. It aims to avoid potential hypoxia from occurring and reduce the threat of further contributing to nutrients pollution in the East Asian Seas and globally. The GEF Clean and Healthy Oceans Integrated Programme provides the opportunity to focus on nutrients pollution management as part of an overall marine and coastal protection initiative, particularly as it looks at land-based sources of pollution that hinder progress on conservation efforts that are focused solely on marine-centered initiatives. This child project would look at three sources of land-based pollution that affects the marine environment. Goal: Reduce excess nutrients from source to sea in Thailand, particularly in the Gulf of Thailand, resulting in improved marine and coastal health while contributing to regional and global targets, fostering a sustainable blue economy. Objective: A comprehensive and integrated system in tackling nutrients pollution coming from all sources in Thailand. Component 1 will focus on nature-based solutions and continued protection of existing nature to minimize land-use change. Thailand's natural vegetation cover is estimated to be greater than 50% of total national watershed areas and should be conserved as part of this project. Other activities will include infrastructure support to promote recovery and reuse of nutrients and improving agriculture fertilizer use. Component 2 will be on improving strategic national policy including the development of an inter-agency task force, fostering cross-sectoral cooperation. This requires engagement of public sector support as well as the private sector such as agriculture, industries, and tourism. Finally, Component 3 will improve on nutrients pollution data and expand the use of existing tools for monitoring. Focus will also be put on building awareness on nutrients pollution across different sectors to be able to ensure action and inclusion in priorities.
Trinidad and Tobago	The project's incremental reasoning for GEF financing centers on the urgent need to combat environmental degradation resulting from the Beetham Landfill's pollution. Through a comprehensive set of activities, the project aims to mitigate pollution, restore ecosystems, benefit local communities, and serve as a valuable resource for knowledge sharing and best practices in environmental management. The current conditions at the Beetham Landfill, characterized by leachate and petroleum dispersion containing hazardous elements like faecal coliform, hydrocarbons, microplastics, and heavy metals, pose an imminent threat. These pollutants are causing rapid degradation of the mangrove forests within the Caroni Ramsar Nature Reserve. The continued presence of these pollutants hampers the natural functioning and services provided by the ecosystem; hypoxia, a consequence of pollution, disrupts the delicate ecological balance and further exacerbates environmental issues. The pollution not only harms the environment but also presents human health hazards. Additionally, the socio-economic well-being of the affected communities is adversely affected. With the additional investment, the aforementioned can be remedied by the development and implementation of improved management; notably (1). Excavation and clean-up of petroleum contaminated area, (2). Construction of drainage canals (3). Commencement of Nature Based Solutions, and 3). Restoration of the hydrological situation in the swamp after pollution has been treated. As a result, this can further capitalize on mobilizing more investments to continue works and provide experiential learnings and best practices for knowledge sharing.

Component 1 aims to pursue a comprehensive, multi-level, multi-sectoral approach to reduce point and non-point source pollution and manage water quality. Specifically, it proposes to develop policy instruments that incentivise sustainable and socially inclusive practices and NbS for enhanced water quality management. It will also review and ensure national effluent water quality standards are adopted and aligned with blue economy indicators. This will be complemented by effective cross-sectoral coordination and strengthening the legal and institutional frameworks to create an enabling environment for practical marine area-based management tools.

- **Improved alignment of national policies and standards with environmental sustainability goals.**
- **Enhanced capacity for cross-sectoral coordination in pollution reduction efforts.**
- **A more robust legal and institutional framework for effective marine area-based management.**
- **Reduced point and non-point source pollution, resulting in improved water quality and ecosystem health.**

Component 2: The financial strategy uses diverse economic tools and incentives to mitigate pollution from both point and non-point sources through NbS, resource recovery, and other innovative methods. Specifically, it will seek to develop a valuation framework for ecosystem services and engage the private sector in nutrient reduction. Nationally, it will seek to implement incentives for cleaner production and effluent management, thereby facilitating resource recovery and pollution reduction at the source. Additionally, a unified suite of financial products geared towards NbS and resource recovery aligned with ESG objectives and blue economy KPIs will be developed.

- **Enhanced understanding of the economic value of ecosystem services.**
- **Increased private sector participation in pollution reduction efforts.**
- **Adoption of cleaner production practices and efficient effluent management in industries.**
- **Availability of diverse financial mechanisms promoting pollution mitigation and sustainable practices.**

Component 3 seeks to utilize science-based, ecosystem-focused methods to reduce nutrient loads and enhance the blue economy through NbS, alternative approaches, and resource recovery. To inform policy decisions, scientific analyses will be conducted to understand nutrient pollution's impact on ecosystems and the blue economy. Also, innovative wastewater treatment and nutrient reduction methods will be piloted, leveraging NbS and resource recovery for scalability and replication.

- **Informed policies addressing nutrient pollution and ecosystem health.**
- **Proven and scalable innovative solutions for nutrient reduction.**
- **Improved water quality, reduced nutrient loads, and enhanced blue economy impacts.**

Component 4 seeks to implement appropriate public awareness campaigns, gender mainstreaming, and stakeholder engagement to address water pollution threats. A harmonized curriculum will also be developed covering water quality monitoring, management, enforcement, and nutrient pollution abatement planning, targeting governments and financial institutions. Also, a social marketing campaign will be launched highlighting the costs and benefits of NbS and alternative approaches for water quality management, targeting governments, financial sectors, and private industry.

- **Increased public awareness and understanding of water pollution issues.**
- **Enhanced gender inclusivity in environmental initiatives.**
- **Improved capacity for water quality monitoring and management.**
- **Adoption of sustainable practices and greater stakeholder engagement in pollution reduction.**

	Component 5 Knowledge management, best practices and lessons learned uptake will be converted to learning resources and shared through local and regional learning platforms. KM tools will be introduced to disseminate knowledge on the available practices for improving the environment by treating litter migrated from the landfill, including leachate, microplastics and petroleum compounds, to limit the impact on the Swamp. Some of these platforms that the project will be connected to are the Global Child Project KM, the CREW+ academy resources, CEP KM Platforms, and the KM system of CLME+ and IWLEARN. • **Accessible learning resources and knowledge sharing among stakeholders.** • **Dissemination of effective litter treatment practices.** • **Greater connectivity to global and regional knowledge management networks.** • **Improved decision-making through informed data and best practices.**
Venezuela	Considering the current policy and investment framework, the GEF financing will contribute to generate scientific information for decision making under an integrated approach, pilot NbS implementation in productions systems, and develop innovative financial mechanisms. Hence, the child project is organized in three components designed to address the identified barriers to achieve the sustainable development of the Maracaibo Lake Basin. The objective of the child project is to minimize pollutant flows into Maracaibo Lake from agricultural, municipal and industrial activities in the sub-basins, to prevent the negative impacts of eutrophication and hypoxia of the lake and contribute to local and global environmental benefits. Three components aligned with the CHO IP Theory of Change are proposed. Component 1 will provide scientific support for decision making in curbing pollution and for raising awareness among the stakeholders in a socially inclusive and gender-sensitive manner to promote the sustainable development of the Maracaibo Lake Basin. Component 2 will strengthen public sector capacities for designing, financing, and implementing public policies to reduce the flow of nutrients from sub basins to the lake. Component 3 will be focused on innovative models and practices to mitigate pollution and generate co-benefits in Maracaibo Lake Basin. This is aligned with the best management practices in agriculture and wastewater treatment, including innovation with NbS. This approach will address the systemic challenges identified and will allow the generation of global environmental benefits by increasing the area of landscapes under sustainable management, reduce pollution and hypoxia in an LME, and mitigating emission of GHGs.
Vietnam	GEF financing is critically important to this project. In order to manage domestic, industrial and agricultural pollution in the Red River Delta; implement best management practices; and hence reduce the levels of nutrient pollution being discharged into the SCSLME. The objective of the project is to address eutrophication-induced hypoxia in the Gulf of Tonkin, SCSLME, by reducing land-based nutrient rich pollution from domestic wastewater, industry and agriculture in the Red River Delta, Vietnam. Component 1. Awareness and understanding for science-based decision-making and action. • Updated science-based modelling of nutrient flows in land and water systems at different administrative and bio-geophysical scales, including assessment of pollution impacts per unit (of population, industrial output and agricultural production). • Science-to-policy approaches, capturing and feeding data into policy-/decision-making, including the development of an environmental and bio-diversity index set in coastal and estuary areas, and integrating it in River Basin planning. • Development of economic tools to assess the value of coastal water resources associated with ecosystems and biodiversity with social and economic development issues in coastal areas, as well as the socio-economic losses associated with eutrophication and/or hypoxia. • Set environmental goals, including water quality goals, and define zoning to support integrated water resource planning and management, and conservation, protection and restoration of hydrological systems (including inland water sources, estuaries and coastal areas). • Networks engaging all sectors for monitoring, early warning and information exchange. • Enhanced capacities (with the development of practical tools that are linked to permits) to monitor and trace nutrient pollution, and water discharge in coastal and estuary areas and facilitate enforcement of regulations. • Leverage bioeconomy solutions, for instance enhance capacities for wastewater treatment that remove nutrients that can be valorized in further bioeconomy applications; remediate soils to avoid nutrient runoff; and, where possible, replace pesticides and fertilizers with bio-based alternatives,with dedicated capacity socially inclusive development approaches.

	Component 2. Policy and financing structures. ● Inter-sector coordination of policies, strategies, plans, regulations and investments. ● Innovative financial instruments, subsidies and incentives to reduce/treat emissions, informed by scientific and economic analyses and monitoring, resulting in increased domestic financing allocation. ● Developing a bioeconomy policy framework and financing mechanisms[127] to enable beneficiaries to recover waste and nutrients into secondary raw materials for generating additional revenue streams and enhance local livelihoods. ● Enhance the legal framework on water resources in which issues of environmental quality management in coastal and estuary areas are integrated. Component 3. Best management practices and pilot applications. ● Reviewing technical options for reducing nutrient flows (including NBS) and systematization and science-based selection of priority options to provide technical guidance to public/private actors on technical options and best management practices. ● Restoration of ecosystems and protection of water sources flowing into the sea, including bioremediation techniques to treat eutrophication (prioritizing vulnerable areas). ● Pilots of technical options for reducing and managing domestic and industrial wastewater flows, including NbS and bioeconomy solutions such as nutrient recycling which can have value-added through use in a range of products such as food, feed, biomass, biofertilizer. ● Consider retention ponds for urban wastewater systems, including agriculture and fisheries functionality and co-benefits.

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Footnotes CHO IP Program Description:

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[125] Cornejo, A., E. López-López, R. A., Ruiz-Picos, J. E. Sedeño-Díaz, B. Armitage, T. Arefina, C. Nieto, A. Tuñón, M. Molinar, T. Ábrego, E. Pérez, A.R. Tuñón, J. Magué, A. Rodríguez, J. Pineda, J. Cubilla & I. M. Avila Quintero. 2017. Diagnóstico de la condición ambiental de los afluentes superficiales de Panamá. 326 p.

[126] Global Environmental Benefits

[127] E.g. Thailand Bio-Circular-Green Economy Action Plan, https://www.bcg.in.th/eng/wp-content/uploads/2022/07/BCG_Action_Plan_-Eng_Small.pdf

Monitoring and Evaluation

Describe the approach to program-level Monitoring and Evaluation, including ways to ensure coherence across Child Projects and to allow for adapting to changing conditions, consistent with GEF policies. In addition, please list results indicators that will track the Program Objective, beyond Core Indicators. (Max 1-2 pages).

233. Each Child Project within the IP will establish and operate its own Monitoring and Evaluation (M&E) system, as a key element of adaptive project management in line with GEF policy requirements, and the GCP will be responsible for overall programmatic M&E.

234. Provisional programmatic indicators are presented in the Program Overview table. Finalized indicators will be formulated in detail during the full formulation phases of each Child Project and GCP. Indicators will be linked to and inform GCP established reporting platforms. This will serve to promote greater global awareness and action to address hypoxia challenges. Indicators will specifically measure the impact of individual child project, the cumulative impact of child project and the catalytic IP effect.

235. M&E at both country and program levels will place a strong emphasis on metrics of systems transformation, in accordance with STAP guidance; to be defined in more detail during the formulation of the country projects and the GCP, these metrics will focus on the following issues related to the levers of transformation:

- Capacity for change: increased capacities for facilitating transformation; increased degree of integration of different forms of knowledge; increased numbers of actors reached; reduced resistance to the need for change.
- Governance and policies: changes in policy, legal and institutional arrangements needed for scaling to happen, dissemination of social norms, narratives and behaviours, and reduction in perverse policy incentives.
- Multi-stakeholder dialogues: existence of appropriate forms of support by important stakeholders, including levels of engagement, influence and learning.
- Innovation and learning: emergence of novel technologies, business models and processes; increased knowledge and learning with and among actors; increased demand for novel products beyond program participants; levels of relevant discourse on the issues addressed.

- Gender transformation : actively promoting women's equal participation, engagement and visibility in knowledge and communication products and program outcomes based on appropriate gender analysis.
- Financial leverage: increase in appropriate financial resources (taxes, subsidies etc.) in support of the GEF scenario, and reduced incentives for unsustainable options.

236. At project and program levels, as appropriate, indicators will be included to validate the degree to which the assumptions set out in the theory of change are realized, and thereby allowing the ToC to be adaptively managed.

Coordination and cooperation with Ongoing Initiatives and Programs.

Is the GEF Agency being asked to play an execution role on this program? Yes

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 (max. 500 words, approximately 1 page)

General Agency Roles

237. FAO will serve as Lead Agency for the GEF-8 Clean and Healthy Ocean Integrated Program (CHO IP). The Asian Development Bank (ADB); The Development Bank of Latin America (CAF); and the European Bank for Reconstruction and Development (EBRD) will serve as Co-Lead Agencies. The Intergovernmental Oceanographic Commission of UNESCO (IOC) and the Global Water Partnership (GWP) will serve as Strategic Partners.

Lead Agency

238. FAO will serve as Lead Agency for the GEF-8 Clean and Healthy Ocean Integrated Program (CHO IP). FAO is the UN specialized agency responsible for food and agriculture covering crop, livestock, and aquaculture production with an overall vision of a world free from hunger and malnutrition through more efficient, inclusive, resilient and sustainable agri-food systems. As Lead Agency, FAO brings highly respected and exclusively relevant institutional capacities needed to address the main sources of land-based pollution targeted by this Integrated Program (IP)[128]

239. All contributions and engagement will be conducted under FAO's leadership. FAO will be responsible for the development and implementation of the Global Child Project (GCP) oversight with contributions the Co-Leads and partners.

240. FAO will ensure overall programmatic coordination and be responsible for program development and management, administrative roles, program coordination coherence, linking GCP and Child Projects (CPs), and full accountability to GEF. FAO will prepare and submit required reports and lead the conduct of mid-term and terminal evaluations.

Co-Lead Agencies and Partners

241. FAO has standard operating procedures in place to manage complex, multi-agency partnerships that have been successfully applied and tested via FAO GEF investments.

242. ADB, CAF, EBRD, UNESCO IOC and GWP (the parties from now onwards), have established solid and long-term professional working relationships. Building upon these relationships, all coordination and governance will continue to be highly collaborative and consultative.

243. The parties will receive resources to implement specific parts of the GCP with details to be agreed upon within the finalized GCP Project Document/CEO Request work-plan and budget.

244. Each party will support FAO by offering technical, project design, implementation, coordination, monitoring, reporting and other capacities based on each agency's comparative advantage. Each party will contribute to program monitoring, progress updates, and financial information as agreed.

245. Each party will ensure that the CHO IP is implemented in line with the Programmatic Approach modality of the GEF Guidelines on Project and Program Cycle Policy.

246. Each party will provide a specific service offer under a global program platform in support of knowledge generation and sharing, development of the KPIs for the IP's result framework, leaning, technical assistance (new tools, guidelines, policy recommendations, and case studies), investment strategies and private sector action plans, financial resource mobilization (public and private sectors), expert advice and leveraging partnerships development at national, regional / LME and global levels.

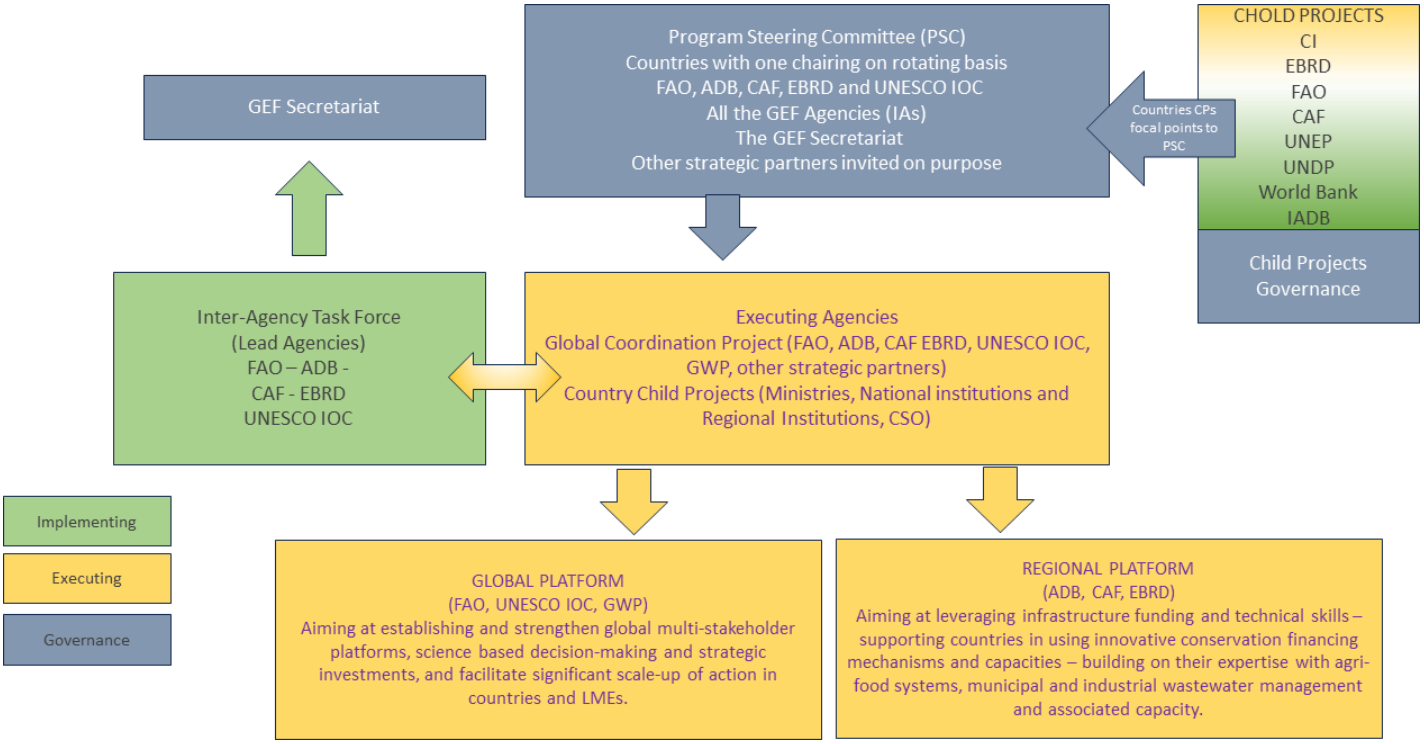

Fig.6: Governance Framework

Steering Committee

247. The CHO IP Steering Committee will be chaired by FAO and will include representation from at least the following organizations:

- FAO
- ADB
- CAF
- EBRD
- UNESCO IOC
- The GEF Secretariat
- GWP

- GEF Agencies
- Representation from select IP countries

248. Representatives of child project PMUs may be invited to participate in meetings of the GCP PSC, and conversely members of the GCP PSC may participate in child project PSC meetings.

Country Child Project governance

'Country Child Project governance arrangements: Each Country Child Project will have its own governance arrangements, which the IA will define during project development. As a minimum, however, each Country Child Project will appoint a country focal point to represent the Country Child Project on the SC, help with annual Programme reporting and ensure coherence and support coordination between the Global Platform and the Country Child Projects, as well as with the overall Programme.'
'Country Child Project focal points: The Lead Agency will agree with each IA a communications protocol between the Global Platform and the Country Child Projects. The aim will be to streamline operational communications, directing communication between parties that are acting, while keeping others informed that need to keep abreast of project implementation, as well as to ensure smooth adaptation to any changing conditions. The expectation is that the IA for each Country Child Project will appoint a primary project contact on the following issues:

- identify appropriate staff to participate in meetings;
- identify the correct counterparts for capacity building needs assessment;
- help identify trainees for capacity building events;
- to identify opportunities for peer-to-peer exchanges, study tours and other capacity building events;
- participate in the SC meetings and other cohort events;
- identify the right counterpart to help organise training events sponsored by the Global Platform;
- help with the transfer of lessons learned to the Global Platform and support communications products; liaise for the preparation of the annual Programme reporting and;
- for other organisational or coordination issues between the Global Platform and the Country Child Projects;
- represent the country in meetings and events related to the Programme as needed to discuss results, share good practices and lessons learned.'

Inter-Agency Task Force

249. As required, FAO will convene a small interagency task force to ensure efficient and effective decision-making among the four GEF agencies and UNESCO IOC. TORs for this Task Force will be included within the final GCP Pro-Doc/CEO Request.
Program Advisory Group

250. A Program Advisory Group (PAG) will support the GCP and PMU to optimize alignment between the IP/GCP and global initiatives/actors. Relevant members of the PAG will meet (as needed, and as requested by the IP co-leads, Steering Committee members, partners and/or agencies), to advise on specific policy, strategic or technical issues.

251. Participation of the GEF Scientific and Technical Advisory Panel (STAP) in the PAG will help to ensure that the IP is at the forefront of global thinking while also providing STAP with opportunities to identify key issues and lessons that may be incorporated into its portfolio-wide guidance.

Terms of Reference

252. Specific Terms of Reference for the IP Steering Committee, Inter-Agency Task Force and PAG will be included within the final GCP Pro-Doc/CEO Request.

	FAO	ADB, CAF and EBRD	UNESCO IOC and GWP
Project Management			
Prepare and Submit CHO IP PFD and Addendum	• Joint drafting of PFD		
	• Submission to GEF	• Sign off	• Consultative
Design and submit GCP	• Joint drafting of GCP		
	• Submission to GEF	• Sign off	• Consultative
Monitoring and Reporting	• Design and establishment of system for GCP- and program-level M&E, including collation of country CP M&E results and investments at LMEs scale in priority LMEs		
	• Joint overall program-level monitoring and reporting		
	• Consolidate M&E between CPs	• Sign off	• Consultative
	• Submission of GCP PIRs	• Sign off	• Consultative
	• Generate annual programmatic M&E reports	• Sign off	• Consultative
	• Conduct mid-term review (MTR) and terminal evaluation (TE)	• Sign off	• Consultative
Technical Assistance			
Identify Child GCPs	• Discussions with participating IAs/EAs as CPs are identified		• Consultative
Review and select Child GCPs	• Participation in review and recommendation of country CP GCPs, with GEFSec and STAP	• Contributing in respective regions • Consultative	• Consultative
Provide inputs on design of Child Projects (CPs)	• Guidance during formulation of CP GCPs, concepts (as annexes to PFD) and CEO Endorsement Requests	• Contributing in respective regions • Consultative	• Consultative
Program Coordination and Oversight			
Program Governance	• Design IP/GCP governance mechanisms that (i) ensure coordination within the program for coherence and consistency, and (ii) connects the program externally to other relevant initiatives		• Consultative
	• Establishment of and participation in governance mechanisms.		• Consultative
	• Establish FAO-ADB, CAF and EBRD interagency task force to ensure efficient and effective decision-making among the four GEF agencies and UNESCO IOC.		
Program Coordination	• Establish global knowledge platforms		
	• PMU for GCP, with FAO coordinating and technical staff according to specialties.		
	• Overall coordination and regular communication with Country CPs ensuring coherence and country drivenness of the IP/GCP.		
	• Establish and support regional platforms to support investments in LMEs tackled by the IP.		

	FAO	ADB, CAF and EBRD	UNESCO IOC and GWP
	• Regular engagement of and communication with LMEs partners to ensure CPs impact and avoid creating silos among the different CPs.		
	• Regular engagement of and communication with all partners to ensure overall program impact and avoid creating silos among the different components of the IP/GCP		
	• Contracting of executing partners for deliverables and roles corresponding to the areas which each co-lead is respectively responsible.		
Program Integration	• Ensuring overall program integration, facilitating learning and exchange between countries and access to innovations, tools, and good practices		
	• Innovation, Technical Support and Knowledge Management on related to components/hubs for which each co-lead is respectively responsible		

GEF Agencies and Initiatives

253. The CHOIP at global, regional and country levels will actively engage and collaborate with a broad spectrum of GEF agencies. Each of the GCP partners (FAO, ADB, CAF, EBRD, IOC, and GWP) have established records of effective collaboration with all GEF agencies.

254. Nine (9) individual GEF agencies (FAO, ADB, EBRD, CAF, UNEP, UNDP, EBRD, CI and WB) are directly engaged via the GCP and/or national Child Projects.

255. The program will engage with responsible GEF Agencies and build upon significant GEF initiatives to date such as the Transboundary Water Assessment Programme (TWAP)[129], the GEF IW-UNEP International Nutrient Management System (INMS) Project[130], and UNEP's principals supporting CReW+[131]. UNIDO will be an important stakeholder in terms of innovation and engagement with green industries, circular economies, and marine pollution with particular attention given to upscaling Transfer of Environmentally Sound Technology (TEST) initiative[132] lessons. UNESCO's [133] relevant experience and guidelines and methodologies on the collection of sex-disaggregated water data will provide useful guidance in identifying interventions for gender-responsiveness and measuring co-benefits.

256. FAO co-leads along with IFAD the highly relevant GEF-8 Food Systems IP. The Food Systems IP co-lead by FAO engages a wide range of GEF agencies globally through multiple fora with the aim of improving this sector's sustainability and conservation impact. As agriculture is generally considered the main driver of nutrient pollution and hypoxia, alignment between the CHO and Food Systems IP offers many opportunities to leverage impact through positive collaboration.

257. The Danube/Black Sea Strategic Partnership on Nutrient Reduction supported by the GEF since the early 90s has contributed to set a successful example of transboundary cooperation for the restoration of ecosystems across the river basin and the marine environment. The Black Sea is one of the most remarkable regional seas in the world: isolated from the flushing effects of the open ocean, coupled with its huge catchment, it is particularly susceptible to eutrophication. Since the 1960s, nitrogen and phosphorus levels from agriculture, municipal and industrial sources have seriously degraded the Black Sea ecosystem, disrupted fisheries, reduced biodiversity, posed threats to humans and resulted in billions of dollars of losses to the economies of the six Black Sea littoral countries. Between the 90s and 2000s, a series of interventions were undertaken to mitigate/reverse the impacts of land-based nutrient and toxic pollution coming from agriculture, municipal and industrial sectors of the 17 riparian countries of the Danube river which were causing threats to transboundary water quality and extensive hypoxic "dead zones" in the Black Sea. The interventions started with a Transboundary Diagnostic Analysis which paved the way to a negotiated Black Sea Strategic Action Plan (BS-SAP) signed with broad consensus on 31 October 1996 (celebrated today as International Black Sea Action Day). The BS-SAP informed actions to implement nutrient discharge control measures as part of the economic

development strategies. The objective of the Danube Regional Project (DRP) was to reduce nutrient loading into the Danube River and its tributaries and to improve water quality in the Danube and the Black Sea. The project was designed to complement the activities of the International Commission for the Protection of the Danube River (ICPDR) and undertook approximately 180 basin activities in addition to 130 national and regional small grant projects. The CHO IP will build on the successful experience and best practices of the Danube/Black Sea Strategic Partnership on Nutrient Reduction taking a source-to-sea approach to alleviate land-based pollution and reduce global ocean hypoxia rates at the scale required in each of the 14 participating countries.

258. Each of these GEF related initiatives as well as several other advancements provide a baseline of knowledge, activities and processes for the CHO IP at both global and CP levels. Discussions are on-going and will be elevated during the PPG with key technical agencies.

259. The PPG will be defined in part by close collaboration with focal points from these and other projects to make certain best approaches are embedded across the IP. This will include the GCP providing pathways to facilitate CP to embed and upscale best practices within their final project designs.

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Footnotes CHO IP Coordination and Cooperation with Ongoing Initiatives and Programs:

[128] Mapping global inputs and impacts from of human sewage in coastal ecosystems Tuholske C, Halpern BS, Blasco G, Villasenor JC, Frazier M, Caylor K (2021). PLoS ONE 16(11): e0258898. https://doi.org/10.1371/journal.pone.0258898

[129] http://www.geftwap.org

[130] https://www.unep.org/gef/projects/targeted-research-improving-understanding-global-nitrogen-cycle-towards-establishment

[131] https://www.unep.org/cep/gef-crew

[132] https://www.unido.org/our-focus/safeguarding-environment/resource-efficient-and-low-carbon-industrial-production/transfer-environmentally-sound-technologies-test

[133] Addressing gender inequality in the water sector | UNESCO: https://www.unesco.org/en/wwap/gender

[134] https://www.thegef.org/documents/expression-interest-templates-gef-8-integrated-programs

Table On Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
520193	0	0	0

Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
3320	0	0	0

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
Ankodida (Madagascar)		Protected area with sustainable use of natural resources	1,200.00			
Behara (Madagascar) - Tranomar		Protected area with sustainable use of natural resources	1,120.00			
Ranomainty (Madagascar)		Protected area with sustainable use of natural resources	1,000.00			

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
516873	0	0	0

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Ambato Atsinanana (Madagascar)		Protected Landscape/Seascape	840.00						
APC Analamaitso (Madagascar)		Protected Landscape/Seascape	15,054.00						
APC Tahiry (Madagascar)		Protected Landscape/Seascape	3,357.00						
APC Vezo (Madagascar)		Protected Landscape/Seascape	8,711.00						
Caroni Ramsar Nature Reserve (trinidad and Tobago)		Protected area with sustainable use of natural resources	800.00						
Central Forest Reserve National	31311	National Park	5,600.00						

Park)St. Kitts and Nevis)									
Ifotaka (Madagascar)		Protected Landscape/Seascape	640.00						
Mandena (Madagascar)		Protected Landscape/Seascape	680.00						
NAP Amoron'i Onilahy (madagascar)		Protected Landscape/Seascape	100,482.00						
NAP Ranobe PK32 (Madagascar)		Others	168,500.00						
NAP Tsinjoriake (Madagascar)		Protected Landscape/Seascape	5,484.00						
PN Tsimanampetsots (Madagascar)		National Park	202,525.00						
RS Bezà-Mahafaly (Madagascar)		Habitat/Species Management Area	4,200.00						

Indicator 2 Marine protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
423250.71	0	0	0

Indicator 2.1 Marine Protected Areas Newly created

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
58000	0	0	0

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
Amboasary (Madagascar)		Protected Landscape/Seascape	1,000.00			
Maldives MPAs		Protected area with sustainable use of natural resources	54,000.00			

Taolagnaro 1 (Madagascar)		Protected area with sustainable use of natural resources	1,000.00			
Taolagnaro 2 (Madagascar)		Protected Landscape/Seascape	1,000.00			
Taolagnaro 3 (Madagascar)		Protected area with sustainable use of natural resources	1,000.00			

Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
365250.71	0	0	0

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Ambinany Marorohy (Madagascar)		Others	1,000.00						
Ampasamasay Manantenina (Madagascar)		Others	1,500.00						
Biosphere Reserve of Ranobe Bay (Madagascar)		Others	42,404.00						
Caroni Ramsar Nature Reserve (Trinidad and Tobago)		Protected area with sustainable use of natural resources	1,500.00						

Elonjato (Madagascar)		Others	1,500.00						
Grandanse Marine Protected Area (Grenada)		Others	20.11						
Lac Anony (Madagascar)		Others	2,300.00						
Littoral de Toliara Biosphere Reserve (Madagascar)		Others	200,470.00						
Molinier-Beausejour Marine Protected Area (Grenada)	14191	National Park	0.80						
MPA Nosy Ve Androka (Madagascar)		National Park	91,445.00						
National Reserve of Paracas (only the bay sector) (Peru)		Protected area with sustainable use of natural resources	21,800.00						
Sainte Luce (Madagascar)		Others	1,300.00						
Sandy Island-Oyster Bay (Grenada)	555592968	National Park	6.60						
WoBurn - Clark-Court Bay Marine Protected	555592983	National Park	4.20						

Area (Grenada)									

Indicator 3 Area of land and ecosystems under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
96711.52	0	0	0

Indicator 3.1 Area of degraded agricultural lands under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Cropland	2,000.00			
Rangeland and pasture	5,000.00			

Indicator 3.2 Area of forest and forest land under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
13,744.00			

Indicator 3.3 Area of natural grass and woodland under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Woodlands	2,000.00			

Indicator 3.4 Area of wetlands (including estuaries, mangroves) under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
73,967.52			

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1274397	0	0	0

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
200,012.00			

Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
53,680.00			

Type/Name of Third Party Certification

COGEMA (Madagascar)

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
995,705.00			

Indicator 4.4 Area of High Conservation Value or other forest loss avoided

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Other forest	25,000.00			

Indicator 4.5 Terrestrial 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)
Alan'Amboaboake (Madagascar)		1,233.00			
Alan'Andranotohoka (Madagascar)		13,340.00			
Ambatosambo (Madagascar)		24.90			
Ambiky (Madagascar)		1,386.00			
Ambondrolava (Madagascar)		680.00			
Ampoezy (Madagascar)		2,263.00			
Andamilamy' Ankoapay (Madagascar)		269.00			
Andrangy (Ala konko Andranotohoke) (Madagascar)		162.00			
Andranotakatse (Madagascar)		9,160.00			
Ankilimivony (Madagascar)		35,499.00			
Antanimena (Madagascar)		592.00			
Aty alan'ny Mangily (Madagascar)		120.50			
Befaratfatsy, Etrovy, Ankazoabo (Madagascar)		3,908.00			
Beheloka haut (Madagascar)		13,773.00			
Fitsitike/Tsihake (Madagascar)		300.00			
Forêt de Hazoroa (Madagascar)		1,550.00			
Gestion communautaire (Madagascar)		840.00			
Gestion privée (Madagascar)		680.00			
Ifanato (Madagascar)		2,000.00			
Itomboina (Madagascar)		5,396.00			
Mamery (Madagascar)		30,367.00			
Maroamalona (Madagascar)		1,670.00			
Ranomay (Madagascar)		3,000.00			

Tanandava (Madagascar)		10.00			
Tolikisy (Madagascar)		15,500.00			

Documents (Document(s) that justifies the HCVF)

Title

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)
6,629,347.00			

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)
3	0	0	0

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE
North Brazil Shelf Bay of Bengual Caribbean sea			

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)
Gulf of Paria which is the receiving water body west of the Caroni Swamp (Trinidad and Tobago)		780,000.00			
Maldives full marine territory		94,000.00			
Miharisoa (Madagascar)		12.00			
Riake Mahavelo (Madagascar)		32.00			
South China Sea Large Marine Ecosystem (Gulf of Tonkin) (Vietnam)		5,000,000.00			
the inner gulf of Thailand		1,000,000.00			
Tombosoa (Madagascar)		145.00			

Vatoharasoa (Madagascar)		1,680.00			
Velonirike (Madagascar)		491.00			
Vezo Mitsinjo ny Hoaviny (Madagascar)		530.00			
Vonehara (Madagascar)		1,770.00			

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	9170093	0	0	0
Expected metric tons of CO_2e (indirect)	18000	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	9,170,093			
Expected metric tons of CO_2e (indirect)	18,000			
Anticipated start year of accounting	2026			
Duration of accounting	20			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (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	North Brazil Shelf,Caribbean sea,Bay of Bengual			

Count	3	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)
North Brazil Shelf	4			
Caribbean sea	4			
Bay of Bengual	4			

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)
North Brazil Shelf	4			
Caribbean sea	4			
Bay of Bengual	2			

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)
North Brazil Shelf	3			
Caribbean sea	3			
Bay of Bengual	2			

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)
North Brazil Shelf	4			
Caribbean sea	4			
Bay of Bengual	1			

Indicator 9 Chemicals of global concern and their waste reduced

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
120.00	0.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.3 Hydrochloroflurocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

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

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

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

Indicator 9.6 POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.7 Highly Hazardous Pesticides eliminated

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
120.00			

Indicator 9.8 Avoided residual plastic waste

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

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	318,880			
Male	297,872			
Total	**616,752**	**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)

GRENADA

CI 2: The 31.71ha of marine protected areas created or under improved management is contingent on implementation of sustainable financing mechanisms supporting human capacity and other constraints in existing MPAs. The total (31.71ha) was calculated from total area of 4 MPAs (20.11 Grandanse,0.8 Mollinere,4.2 Woburn,6.6 SIOB).

CI 3: Some of the land within the selected watersheds may be under private land ownership making it hard to confirm at this time if they will implement improved practices. The ecosystems targeted for restoration total (23.52 ha) was calculated from protected ecosystem classes areas (14.96 Grandanse, 0.55 Mollinere, 5.07 SOIB, 2.94 Woburn).

CI 4: Watersheds were identified instead of sites and n = 11 watersheds that contribute to water quality were identified: Grenville Bay, Grand Bay, GrandAnse, Windward, Lauristan, St Johns, Beausejour, Halifax, Richmond Hill, Chemin, Pointsfield (these watersheds total 6,037 ha).

CI7: CLME

CI 11: Given the inclusion of a national awareness campaign on pollution impacts, a modest estimate of direct beneficiaries could be determined. The direct beneficiary estimate was determined by taking 10% of the total population of Grenada (125,438), as it is believed that at least 10% of the population will be reached and compelled to act due to the awareness campaign.

JORDAN

CI 4 is based on the size of the landfill site to be restored. The indicator will be confirmed in the EBRD technical due diligence report in 2024 and will be provided in the CEO Endorsement document.

CI 5. Data on the size of marine dead zones in Aqaba Bay are not readily available in the public domain. The target is based on the assumption that the leachate from the landfill under the baseline investment project reaches Aqaba Bay through underground water resources system (to be confirmed under EBRD due diligence report in 2024). In addition, EBRD is in discussions with the country on the financing of the desalination project which will be confirmed within 2024. Aqaba Bay covers an area of approximately 2,900 hectares. It is assumed that the project will target 10% of the entire area of the Bay.

CI 6. The primary source of these reductions stems from closing and remediating the dumpsite and establishing a new sanitary landfill in compliance with EU standards. The landfill may generate landfill gas, influenced by waste quantities, composition, and precipitation patterns. A conservative estimate using the US EPA Landgem model anticipates approximately 18,000 tons per annum of CO2 eq emissions reduction (2025 to 2050). Detailed calculations will be conducted in the technical due diligence (DD) phase. This estimate excludes potential benefits from dumpsite closure measures, like active or passive landfill gas collection, and the introduction of a mechanical-biological treatment plant (MBT), which further reduces landfill gas and leachate production. Scope 3 emissions from enhanced recyclables sorting are also not accounted for. The DD will assess options for landfill gas management, potentially yielding CO2 equivalent savings through renewable energy production in gas engines.

CI 11 estimates are based on the EBRD baseline investments: the whole system of municipal solid waste approach using the metrics the whole population of the catchment area in the Aqaba Governorate, which is equal to 228,000 inhabitants ; and using a conservative estimate of benefiting 40% of the population. This totals to 91,200 direct beneficiaries, half of whom will be women. The population of the Amman Governorate will benefit from the desalination investment. However, at the stage of the Concept, it is not possible to distinguish between project contribution vs. attribution and the targets will be formulated during the PPG phase.

MALDIVES

The child project looks to address nitrogen and wider nutrient pollution as a systemic problem across society, with system-wide benefits for the whole of the Maldives, including by better evidence for underpinning decisions (inc via data on nutrient pollution and hypoxia, models application, financial and policy evidence, barriers analysis etc). In addition to the benefits of specific interventions at key sites in the Maldives, the education and awareness activities look to build a catalytic approach, that leads to investment through 'Nitro-Finance', with policy mobilization across the whole of the Maldives. The benefit estimates for the indicators shown here are based on this Maldives-wide perspective.

CI 2: value is the existing Marine Protected Area of the Maldives, which will see improved management through improved nitrogen policies.

CI 4: The area of landscapes under improved practices represents the specific area of the three case study Islands (Lamu Gan 500 ha; Thoddo 160 ha and Villimale 30 ha), however the project will also benefit the total land area of the Maldives at 300 km2 through improved national policies including urban/rural, agricultural/fisheries/tourism, natural/managed dimensions.

CI 5: is the area of marine habitat under improved practices (excluding protected areas) and represents the 20 km zone around the three study islands, while, as part of the ambition to reduce the extent of eutrophication and hypoxia over the full area of the Maldives.

CI 7: is based on the 1 LMEs to which the project is relevant (Bay of Bengal), in addition there are number of 187 inhabited islands of the Maldives, which will see benefits through improved national policies via the National Nitrogen Action Plan to be developed.

CI 9: is set to 120 tons of Nitrogen as conservative assessment. However, based on a catalytic contribution to meeting the global goals of the Colombo Declaration of "halving nitrogen waste" by 2030, saving 100 million tonnes Nr per year, worth 100-300 billion USD globally and the Global Biodiversity Framework, mobilized by Maldives developing as a regional and global champion country for sustainable nitrogen management. The number given here is based on the share of world population in the three study islands of the Maldives (Lamu Gan, 2800; Thoddoo, 1900; Villimale 6700, i.e. 2.2% of the Maldives population) multiplied by a target global saving of 100 million tonnes of N (based on Our Nutrient World). The total value for the Maldives is estimated at 5500 tonne nitrogen. CI9, together with CI 6 and CI8: further estimates will be developed during the life of the child project.

CI 11: is based on the population of the three study sites, Lamu Gan, Thoddoo and Vilimale, Thowho will directly benefit by actions for improved nitrogen management. The results are equally beneficial based on gender (hence 50:50).

MADAGASCAR

CI 1.2: 510,473 ha of the Tahiry (3,357ha), Vezo (8,711ha), Analamaitso (15,054 ha), Ranobe (168,500ha), Tsinjoriake (5,484ha), Beza-Mahafaly (4,200ha), Amoron'i Onilahy (100,482ha), Tsimanampetsotsa (202,525ha), Mandena (680ha), Ambato Atsinanana (840ha), Ifotaka (640ha) protected areas in the Mandrare watershed in the Anosy Region. Data were obtained from the Regional Directorate of Environment and Sustainable Development.

CI 2.1: 4,000 ha of Taolagnaro 1, 2 and 3 (3,000 ha) and Amboasary (1,000 ha) Marine Protected Areas. Data were obtained from the Regional Directorate of Environment and Sustainable Development.

CI 2.2: 341,919 ha include Nosy ve Androka (91,445 ha), Toliara (200,470 ha), Ranobe Bay (42,404 ha), Sainte Luce (1,300 ha), Elonjata (1,500 ha), Ampasamasay Manantenina (1,500 ha), Ambinary Marorohy (1,000 ha) and Lac Anony (2,300 ha). Data were obtained from the Regional Directorate of Environment and Sustainable Development.

CI 3.2: 5,141 ha include degraded landscapes around protected areas indicated under Indicator 1 and 2. These include Tahiry (33.6ha), Vezo (87.1ha), Analamaitso (150.5 ha), Ranobe (1685ha), Tsinjoriake (54.8ha), Beza-Mahafaly (42ha), Amoron'i Onilahy (1,004.8 ha), Tsimanampetsotsa (2,025.3ha),Behara-Tranomaro (11.2 ha), Ankodia (12ha), Ranmainty (10 ha), Mandena (6.8ha), Ambato Atsinanana (8.4ha), Ifotaka (6.4ha).

CI 4.2: COGEMA 680ha

CI 11: The number 3,500 of direct beneficiaries was calculated based on the number of households living in the communities in sites of the project implementation.

MEXICO

CI3: sub-indicators 3.1 (7,000 ha), 3.2 (1,500 ha), and 3.4 (2,500 ha) were identified using CONABIO's "Priority Sites for Restoration" to pinpoint crucial restoration sites for preserving biodiversity and ecological functions long-term. Restoration costs per hectare were also considered, drawing insights from various restoration approaches employed in Mexico, encompassing a blend of passive and active restoration methods, desilting, and flow recovery.

CI4: and sub-indicator 4.1, we integrated CONABIO's spatial data with INEGI's vegetation and land use maps, along with insights from the Third Biennial Update Report to the United Nations Framework Convention on Climate Change, 2022. This approach targets enhanced sustainable land management practices within agricultural land, forests, and wetlands across three priority landscapes.

C15: and sub-indicator 5.2: 590,377 ha (see Annex 5) of coastline that covers territorial sea and borders the basins in which project activities will reduce hypoxia and eutrophication on each LME (144,892 ha Gulf of Mexico (GoM)), Caribbean (235,260.45 ha (CLME)) and Central American Pacific (235,260.45 ha (PACA)).

CI6: FAO´s EX-ACT (see Annex 2) informed GHG mitigation benefits over a 20-year span starting 2026. The project spans 211,000 ha, designated for improved management and restoration activities to achieve mitigation benefits.

CI7: CLME

CI11: calculations were based on population centers within selected restoration and management areas, utilizing data from the 2020 National Census. Indigenous Peoples and Local Communities within these landscapes will play a pivotal role as key partners and beneficiaries of project activities.

MOLDOVA

CI3: This indicator signifies the projected 5,000 hectares of land and ecosystems slated for restoration within the Dniester River Basin. Restoration activities, such as afforestation and wetland rehabilitation, aim to mitigate nutrient pollution and enhance ecosystem health. Areas of investment will be defined by the Project Implementing Unit (PIU).

CI4: This indicator reflects the anticipated improvement of 50,000 hectares of landscapes through sustainable agro-forestry and other enhanced practices. This indicator captures the total area of landscapes under improved practices, including in production sectors (e.g., agriculture, rangeland, forestry, aquaculture, etc.) for the Dniester River. These interventions will contribute to reducing nutrient pollution and achieving better environmental outcomes. To measure this indicator, satellite images and surveys will be used at the start and end of the project.

C11: This indicator quantifies the project's expected impact on 25,000 local individuals, considering both men and women (disaggregated at 50/50), who are living within the region the project will address. These beneficiaries will experience improved livelihoods, cleaner water sources, and enhanced socioeconomic opportunities, aligning with the project's goals. This indicator will be measured through surveys conducted at the start and end of the project.

PANAMA

CI3: Area of land and ecosystems under restoration

Based on mapping of mangrove areas, land use verification, and mapping of mangrove species distribution in Parita Bay, we have preliminarily identified 43 hectares with potential for mangrove restoration and/or enhancement.

CI4: Landscapes under improved practices (excluding protected areas)

Following the methodology of the PIASI program currently implemented in Panama, which promotes agroecological systems in several regions, we have estimated that with the investment for this project we will reach approximately 600 hectares, in which both technical assitance for landscape planning and actual implementation of Best Management Practices (BMPs) will be delivered.

CI7: CLME

CI11: People benefiting from GEF-financed investments disaggregated by sex (count)

Based on the potential of 600 hectares to be supported with agroecological systems and technical assistance for 43 ha to be restored, we have estimated that around 750 people will benefit from direct investments, including farmers, watershed committees, local government, and selected community members supporting participatory monitoring and coastal restoration efforts (The expectation is that at least half will be female). The number of direct beneficiaries has been calculated carefully to avoid double counting. We estimate that low-intensity beneficiaries are 7000 people living within the watershed that will be targeted with improved management plans supported through the project (The expectation is that at least half will be female).

PERU

The project will reduce pollution and reverse eutrophication and hypoxia processes in two coastal marine areas of Peru, contributing to the conservation of the Humboldt Current Large Marine Ecosystem (HCLME). It will contribute to these indicators as follows:

CI 2 (2.2): Pisco priority zone includes Paracas Bay (21,800 Ha), coastal-marine protected-area "National Reserve Paracas", which will improve its management through development of bioremediation experiences, extraction and utilization of invasive species, and promotion of sustainable practices in productive activities affecting this area.

CI 3 (3.4): Pisco priority zone includes coastal wetlands (2,003 Ha), which will be restored by establishing conservation mechanisms, recovering native vegetation, removing municipal debris and rubble, and promoting sustainable practices in the productive activities affecting this area.

CI 5 (5.2): 38,680ha. Prioritized zones of Chimbote (El Ferrol Bay 14,900 Ha) and Pisco (Paracas Bay 21,800 Ha and Pisco wetlands 1,980 Ha) are coastal-marine habitats that will reduce hypoxia and eutrophication affections for the benefit of biodiversity through development of Nature-Based Solutions (NBS), as well as key actions to enhance municipal infrastructure, governance, and financial mechanisms.

CI 11: 13,800 people directly benefited (10% of population in priority zones who works on pollution-generating activities). Due to significant women presence in these activities, project will implement strategies to ensure intervention of at least 6,900 women (50%). This estimate draws from the experience of UNDP Peru and MINAM in marine-coastal previous projects. Indirect beneficiaries are estimated at 470,566 people.

It also significantly contributes to achieving 14 targets of the Kunming-Montreal Global Biodiversity Framework.

SRI LANKA

Core Project Indicators are based on estimates utilising geospatial map (Annex 1), datasets and other relevant information. These will be examined in detail and calculated during the PPG.

CI 3: Estimation of indicator 3 was made on the basis of geospatial maps and datasets on landcover, cropland, protected areas and degraded lands. The estimate was made on spatial proportion and size of wetlands and riparian buffers targeted for restoration within the Kaya Oya and Mee Oya river basins.

CI 4: Estimation of indicator 4 was made on the basis of a geospatial map and datasets on landcover and agricultural classification. The estimate was based on the land area and proportion of irrigated cropland (paddy), rainfed cropland and aquaculture (prawn farms) targeted for improved practices. Indicator 4 is also based on a geospatial map used to estimate the proportion of the BOBLME bordering the north-west area of Sri Lanka where the Kala Oya and Mee Oya rivers discharge to the ocean. This area includes the Bar Reef Marine Sanctuary.

CI 5: is based on a geospatial map used to estimate the area of the Bay of Bengal Large Marine Ecosystem bordering Sri Lanka where the Kala Oya and Mee Oya rivers discharge.

CI 6: is an estimation based on the successful implementation of project interventions. Calculation of emissions target for the project using the EX-Ante Carbon-balance Tool will be performed during the PPG.

CI 7: BOB LME

CI 11: was based on datasets and geospatial map, in the context of farming population densities within the Kaya Oya and Mee Oya river basins. Direct beneficiaries are estimated at at 40% of the total number of rural dwellers within the project area whose farming practices will be improved through project interventions.

St. KITTS and NEVIS

CI 1: The project will contribute to an estimated 5,600 ha (St. Kitts Central Forest Reserve) terrestrial/marine protected areas with improved management;

CI 4: The project will contribute to an estimated 5,600 ha (St. Kitts Central Forest Reserve) terrestrial/marine protected areas with improved management; and 3,000 ha of landscapes for sustainable land management in productive systems by working directly with farmers and fishers (the 3,000 ha will be within the Nevis Peak area—a terrestrial OECM, which is a total area of 3,250 ha and the St. Kitts and Nevis Marine Management Area, which is a total area of 18,987 ha); and notably, will contribute to the Caribbean LME with reduced pollution and hypoxia and avoided marine litter (50% reduction in terrestrial areas, 40% reduction in marine managed areas).

CI 7: CLME

CI 11: Given the size of St. Kitts and Nevis the project team has estimated reaching at least 10% of the total population (48,000 in 2022), particularly because the sites include the St. Kitts and Nevis Marine Management Area (MMA), which is the entire coast of the country and where the majority of the population live. These figures will be reassessed during the PPG.

TRINIDAD AND TOBAGO

CI 1: Terrestrial protected areas created or under improved management (ha)

Component Sub-Indicator: 1.2. Terrestrial protected areas under improved management effectiveness

The terrestrial protected area identified falls within the 8,398 ha of the Caroni Swamp which is protected by the RAMSAR Convention, as a wetland of international importance under the jurisdiction of the Forestry Division, Ministry of Agriculture, Lands and Marine Resources 3197 ha falls within a forest reserve and falls under criterion 4 of the Convention, which states that a wetland should be considered internationally important if it supports plants and/or animal species at a critical stage in their life cycles or provides refuge during adverse conditions. Certain sections of the swamp are also protected under the Forest (Prohibited Areas) Order, including areas designated sanctuaries:

-Prohibited Area (4,000 ha.) declared in 1987 under the Forests Act (Legal Notice #141 of 1987);

-Three Wildlife Sanctuaries (200ha) declared within the Forest Reserve in 1953 and 1966;

-Caroni Swamp Forest Reserve Proclaimed in 1936.

For the purposes of this intervention, an area comprising 800 Hectares within the Caroni Ramsar Nature Reserve have been identified as the terrestrial area which would be improved as a result of the proposed intervention.

CI 2: Marine protected areas created or under improved management (hectare)

Component Sub-Indicator: 2.2. Marine protected areas under improved management effectiveness

The marine protected area identified falls within the 8,398 ha of the Caroni Swamp, which is protected by the RAMSAR Convention, as a wetland of international importance under the jurisdiction of the Forestry Division, Ministry of Agriculture, Lands and Marine Resources 3197 ha falls within a forest reserve and falls under criterion 4 of the Convention, which states that a wetland should be considered internationally important if it supports plants and/or animal species at a critical stage in their life cycles or provides refuge during adverse conditions.

Certain sections of the swamp are also protected under the Forest (Prohibited Areas) Order, including areas designated sanctuaries:

-Prohibited Area (4,000 ha.) declared in 1987 under the Forests Act (Legal Notice #141 of 1987);

-Three wildlife Sanctuaries (200ha) declared within the Forest Reserve in 1953 and 1966;

-Caroni Swamp Forest Reserve Proclaimed in 1936.

This area serves as a breeding/nursery habitat for fish (marine and freshwater species) and shrimp, which sustains fisheries in the Gulf of Paria. In addition, there are approximately 190 species of birds found at the Caroni Swamp, including resident and nesting water birds, migratory species and forest pasture birds that roost in the mangrove, this area is an important habitat for Trinidad's national bird, Eudocimus ruber (Scarlet Ibis). The Scarlet Ibis was declared an Environmentally Sensitive Species under the Environmentally Sensitive Species (Scarlet Ibis) Notice, 2018. Approximately 324ha of land in the central portion of the Caroni Swamp was designated as a wildlife sanctuary under the Conservation of Wildlife Act, where the Scarlet Ibis as well as over 100 avifauna species utilize this area for roosting. The Carini Swamp is one of the only known breeding habitats of the Scarlet Ibis.

An area comprising 1,500 Hectares within the Caroni Ramsar nature reserve has been identified as the marine area which would be improved as a result of the proposed intervention.

CI 3: Area of land and Ecosystems under restoration management (hectare)

For the purposes of this intervention, an area comprising 8,398 ha within the Caroni Ramsar nature reserve has been identified as the terrestrial area which would be improved as a result of the proposed intervention.

CI 5: Area of marine habitat under improved practices (hectare)

As a result of this intervention, the marine habitat of the Gulf of Paria would be improved. The Gulf of Paria which is the receiving water body west of the Caroni Swamp a 7800 square kilometers (780,000 hectares) in size.

CI 7: Shared water ecosystems under new or improved cooperative management.

Pollutants from the Beetham landfill ultimately flow into the Gulf of Paria, and by extension, into the Caribbean Sea, and the North Brazil Shelf Large Marine Ecosystem (LME).

Core Indicator 11: People benefiting from GEF-financed investments disaggregated by sex:

Communities surrounding the project site will directly benefit from clean water and improved sanitation. The Communities which would directly benefit from the intervention are the Beetham Estate and Sealots communities. Population and Demographic Information provided by the Central Statistical Office of Trinidad and Tobago for the year 2011 gave a count of 1078 households in the Beetham community with a total of 3442 residents: 1743 male and 1700 female. The Sealots community had a total of 379 households with a population of 1259; 645 male and 614 female.

THAILAND

CI 4 The area of the three sites is summarized as below:

Agricultural	Watershed	620,378 ha
Ban Laem District	18,990 ha	
Tourism Chonburi Province Area		1,130,000 ha
Pattaya Area	5,340 ha	
Bang Saen Area	2,027 ha	
Fishing Port	Watershed	291,728 ha
Pranburi District	76,540 ha	
Forest Area	25,042 ha	
Mangroves	3,017 ha	

Nature-based Solutions and Conservation efforts would mostly be occurring in the agricultural site for this project. The project would aim to have a watershed-wide conservation effort for the 620,378 ha / 0.620M ha. This would be further finalized during PPG phase of the project.

CI 5: The size of the inner gulf of Thailand is 1,036,000 ha. Improvements in reducing nutrients pollution is projected to reach this wide scale. However, it should be noted that other marine and coastal efforts must be implemented alongside this project to ensure cohesively tackling all issues in this environment.

CI 11: Within Outcome 1, the project will directly work with local communities and women from the agricultural, tourism, and fishing port sites. Support varies from training, capacity building and widescale information dissemination to individual innovation support. The National Statistical Office of Thailand census averaged about 3 members per household, thereby amplifying direct support towards household members. The census also indicated an almost 50:50 split across sex. Government officials would also be involved such as in trainings and capacity building, particularly in policy development and monitoring. The project intends to be upscaled at regional level, therefore including other neighboring countries in regional dialogue. National policy changes resulting in improved land and marine environment and direct improvements on the land and marine environments in the project sites would also subsequently improve the population.

Direct Indirect

Targeted Support High Intensity Medium and Low Intensity

Agriculture 3,000

6,000 54,146 (M 26,412; F 27,734)

Tourism 4,000

8,000 1.535 M (M 772,463; F 881,209)

Fishing Ports 1,000 1,000 79,392 (Male 41,934; F 37,458)

Government Across the Sectors and at National Level 300 600

East Asian Seas Regional 100 200

VENEZUELA

CI 4.3. Pilots for sustainable agricultural production and implementation of Nature based Solutions (NbS) will be established in approximately 40,000 ha of the Catatumbo and Chama rivers basins (approximately 4% of the total area).

CI 6. Preliminary estimated GHG emissions mitigated in the pilot areas under sustainable production and NbS (20 years accounting): 2,175,327 tCO2-e. The estimation considers mitigation due to direct interventions in 40,000 ha of pilots in Catatumbo and Chama rivers basins. Indirect mitigation will be further assessed during project formulation, as well as an estimation on the project contribution in GHG mitigation due to improved wastewater treatment.

CI 7 CLME and NBS LME

CI 11. 100,000 people will benefit directly for the project, it is estimated that 5,000,000 will benefit indirectly, approximately 50% of each gender. Estimated number of direct beneficiaries considers one member from each family of the Catacumbo and Chama Rivers (approximately 400,000 families total), where project interventions will take place to build capacities in sustainable practices, raise awareness and improve water quality. Indirect beneficiaries are the whole population of Zulia state, who will improve their quality of life.

VIET NAM

Core Project Indicators are based on estimates and calculations utilising geospatial maps (see Annex), datasets and other relevant information. These will be examined in detail during the PPG.

CI 3 was made on the basis of geospatial maps and datasets on landcover. The estimate was made on spatial proportion and size of wetlands and riparian buffers targeted for restoration within the Red River Delta, Vietnam.

CI 4 was made as an approximate, based geospatial maps and datasets on landcover including cropland. The estimate was based on the land area and proportion of irrigated cropland, aquaculture and surface water bodies.

CI 5 is based on a geospatial map used to estimate the proportion of the Gulf of Tonkin in the South China Sea Large Marine Ecosystem (SCSLME) bordering the Vietnam where the Red River discharges.

CI 6 is an estimation based on the successful implementation of project interventions. Calculation of emissions target for the project using the EX-ACT Carbon-balance Tool will be performed during the PPG.

CI 11 was based on datasets and geospatial map, in the context of farming population densities within the Red River Delta. Direct beneficiaries are estimated at 40% of the total number of rural dwellers within the project area whose farming practices will be improved through project interventions.

GLOBAL COORDINATION PROJECT (GCP)

Except for CI 11, The Global Coordination Project will not be directly responsible for the delivery of attributable global environmental benefits, as reflected in core indicators. It will facilitate and enhance the delivery of GEBs/core indicator targets by the fourteen child projects, in their target geographies: these are accounted for in the core indicator tables of each child project and will be measured by each child project. The GCP will also catalyse the scaling out of GEBs beyond the child project geographies.

For CI 11: it is expected to directly benefit 275,000 people (150,000 female and 125,000 male), with global, regional and nation workshops, trainings, capacity building activities, and awareness companies.

Risks to Achieving Program Outcomes

Summarize program-level risks that might emerge from preparation and implementation phases of child projects under the program, and what are the mitigation strategies the child project preparation process will undertake to address these (e.g. what alternatives may be considered during child project preparation-such as in terms of consultations, role and choice of counterparts, delivery mechanisms, locations in country, flexible design elements, etc.). Identify any of the risks listed below that would call in question the viability of the child project during its implementation. Please describe any possible mitigation measures needed.

The risk rating should reflect the overall risk to program outcomes considering the global context and ambition of the program. The rating scale is: High, Substantial, Moderate, Low.

Risk Categories	Rating	Comments
Climate	Substantial	FAO together with the other leading agencies to the IP will conduct a Climate Risk screening and assessment during the PPG phase. This analysis will be countries driven. The timeline for the development of the IP and the definition of the 14 Child Projects did not allow to properly run this analysis and assessment before submission. Climate change is closely linked to and a driver of hypoxia and coastal ecosystem

		health. Although the CHO-IP will ultimately help to deliver adaptation and mitigation contributions, several of the Child Projects are located in areas prone to climate change impacts. Following STAP guidance on climate risk screening (June 2019), each of the Child Projects will conduct targeted climate risk assessments during the PPG. The detailed climate risk assessments and management planning for amelioration will be conducted with the support and of the GCP in order to make certain all climate risks are identified and monitored at both project and programmatic scale to allow for necessary adaptive management. This innovative approach will capitalize upon opportunities presented by the IP structure while allowing for nuanced assessments and risk mitigation measures adapted to country and LME specific conditions. The climate risk screening, assessments and adaptive management planning will consider multiple dimensions (hazards, vulnerability, etc.) based upon multiple scenarios and best available science. The inputs of IOC will be valuable in this regard, particularly considering the nexus between climate change, nutrient pollution, and hypoxia.
Environment and Social	Moderate	The CHO-IP will work to reduce environmental risks, particularly pollution associated with coastal hypoxia. In addition, the CHO-IP will focus upon the development and implementation of innovative NbS. Social risks should be minimal. Indeed, the CHO-IP will deliver a number of social benefits including much improved sanitation and health services (e.g., access to improved

		wastewater treatment) and more secure ecosystems services (e.g., coastal zone conservation).
Political and Governance	Substantial	This is an important risk to consider throughout the CHO-IP. As noted in the text, addressing coastal zone hypoxia demands that political will exists and that this political will is translated into fundamentally effective governance. The risk has been carefully considered and is reflected in the GEF-8 Programming Directions, the submitted EOI, this PFD, and each of the individual national CP CN. The national CP CN each do a valid job of considering this risk and pointing out the baseline actions/investments to build upon. These reflect the national demand for action to address pollution sources and reduce coastal hypoxia. For the GCP, there are safeguards built in and strategies that will be further elucidated during the PPG with strong support from globally influential institutions such as FAO, IOC, ADB, CAF, EBRD, and GWP, among others.
Macro-economic	Moderate	Project activities each have financing identified. Co-financing commitments will be regularly monitored and assessed.
Strategies and Policies	Moderate	The CHO-IP is designed to support and enhance strategies and policies to address ocean hypoxia. As noted in the PFD and each of the CNs, the CHO-IP is well-aligned with strategies and policies.
Technical design of project or program	Moderate	The CHO-IP follows GEF guidance for program design. STAP has already been engaged in the design process along with GEF-SEC experts. Due to the strong international cohort of partner institutions, the CHO-IP to date has

		benefited from the inputs of global expertise covering all relevant sectors. This will continue through the PPG with support provided to the ultimate technical design of the GCP and each National Child Projects.
Institutional capacity for implementation and sustainability	Moderate	Each of the associated GCP agencies and partners have extensive capacity to implement and sustain CHO-IP results. Similarly, the GEF agencies and each of the national CPs benefit from strong institutional capacity. This will risk will be taken fully into account during CHO-IP final design, including making certain networks, linkages, M&E and other factors are incorporated within and coordinated between the GCP, cohort of national CPs, and any additional countries, regions, or organizations that participate in the CHO-IP.
Fiduciary: Financial Management and Procurement	Substantial	Although co-financing for this CHO-IP is very high (approximately 8:1), addressing the sources of ocean hypoxia can be substantial and a heavy burden on national and private budgets. This risk has been fully considered and will be the focus of much of the CHO-IP's efforts with the overall objective focused upon policy, regulation and investment. Again, the cohort of CHO-IP partners, including IFIs, brings extensive skills and experience to the table in terms of ensuring strengthened investment capacity.
Stakeholder Engagement	Moderate	Child project interventions engaging Indigenous Peoples will adhere to the respective Implementing Agencies' and the GEF's Principles and Guidelines for Engagement with Indigenous Peoples. Child project interventions will adhere to the respective Implementing Agencies' and the GEF's Policy on

		Environmental and Social Safeguards.' As noted, addressing ocean hypoxia represents the need to address a complicated stakeholder ecosystem inclusive of public, private, and CSO actors covering multiple sectors (e.g., agriculture, wastewater treatment, IWRM, coastal conservation, etc.) and large, international land and seascapes. This risks have been considered and are reflected in the CNs, including review of stakeholder identification and cursory strategies. The CHO-IP under each of the Outcomes – but particularly Component 1 – will very much drill down upon and make certain that stakeholder concerns are considered and addressed, including enhancing opportunities for inclusive dialog and engagement at global, regional and national levels.
Other		
Financial Risks for NGI projects		
Overall Risk Rating	Moderate	The GCP will actively work to ensure that risks are considered, integrated, and monitored with necessary remedial actions taken. This will include support full collaboration, coordination, and sharing of lessons and experiences between partners and projects to make certain risks are identified and mitigation measures effective throughout the design and implementation process.

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 that any country policies that might contradict with intended outcomes of the project have been identified. (approximately 2-3 pages)

Alignment with GEF-8 Programming Strategies

260. FAO will work closely with GEF-SEC and other Lead Agencies to maximize alignment and synergy across all IPs with particular emphasis upon Food Systems, Sustainable Cities, Circular Solutions to Plastic Pollution, Blue Green Islands and Ecosystem Restoration. ADB and FAO are both engaged in projects under Blue Green Islands, Ecosystem Restoration, and Elimination of Hazardous Chemicals in Asia. As noted in the "capacities" discussion, FAO has experience and programming that focuses upon Sustainable Cities. ADB and FAO are partners to the Circular Solutions to Plastic Pollution IP. FAO and IFAD will serve as co-lead for the Food Systems IP which offers multiple opportunity for synergistic approaches and impacts at the global level, including promotion of land-based regenerative agriculture that will target coastal zone pollution.

261. Nature-positive transformation of targeted sectors will align with and contribute to each GEF Focal Area. Healthy coastal ecosystems and fisheries are critical to the livelihoods and economic well-being of many countries. These ecosystems mitigate climate change, strengthen resilience and conserve globally significant biodiversity. The result will be an enduring reduction of coastal zone degradation along with achievement of substantial BD, LD, CC, IW, and CW co-benefits. Quantifiable targets (numeric impact) will be more firmly established within the PFD and Child Projects.

262. International Waters: Pollutant run-off resulting in hypoxia degrades shared freshwater and marine ecosystems and associated fisheries and habitats. Reducing these pollutants will directly support achievement of multiple IW focal area goals and actions, including enhanced security of freshwater ecosystems, sustaining healthy blue ecosystems and advancing sustainable fisheries management through LME collaboration, strategic investments, and private sector engagement. The IP will be designed to particularly contribute to the GEF-8 IW's Objectives 1 and 3.

263. Biodiversity Conservation: Work under this IP will apply a similar "landscape based approach" as required under the BD Focal Area strategy. Implemented actions will reduce harm to, promote conservation of, and apply NbS to regenerate coastal zone biodiversity in line with both the Convention on Biological Diversity (CBD), the Global Biodiversity Framework (GBF), and Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ) agreement.

264. Land Degradation: Curbing non-point source pollution impacting coastal zones requires solving land degradation challenges and, therefore, supporting achievement of voluntary LDN targets under the UNCCD.

265. Climate Change: Unsustainable agriculture and municipal sources of coastal pollution contribute to climate change. Nature-based solutions to coastal zone degradation such as regenerative agriculture, improved management of livestock waste, and restoration of wetland, mangrove and seagrass habitats offer high mitigation potential. These efforts align very closely with the UNFCCC.

266. Chemicals and Waste: Emplacing systems to reduce hypoxia causing pollution emanating from agriculture, industrial, and municipal waste will support reduction of pollutants listed under the Stockholm and Minamata Conventions as well as plastics and other elements of SAICM.

Alignment with Country and Regional Priorities

267. Each national Child Project is fully aligned with country and regional priorities. Following is a brief table highlighting this alignment. Please see the approved Concept Notes attached for additional detail. Further analysis and information will be available during the PPG.

Country	Overview of Proposed Child Project Alignment with Country and Regional Priorities

Grenada	The Integrated Coastal Zone Management Policy for Grenada, Carriacou and Petite Martinique (2015) highlights marine pollution from land-based sources and watershed runoff as key coastal zone management issues, whilst the National Biodiversity Strategy and Action Plan (2016-2020) identifies pollution through waste disposal and unsustainable agricultural practices as two of the main threats to biodiversity in freshwater ecosystems. Goal 4.4 of the National Ocean Policy (NOP) supports the improved management of land-based and marine pollution, whilst the NOP Strategic Action Plan includes provisions to develop a marine pollution strategy and action plan and increase public awareness of ocean importance, NOP, and blue economy. Grenada's Coastal Master and Marine Spatial Plan has identified priority Blue Economy opportunities, two of which directly address marine pollution through land-based sources.
Jordan	The Jordanian government is aware of its water challenges and has passed several strategies and policies in recent years to address water pollution and water scarcity, as well as prepare the country's water sector for the future. The challenges and linkages between national development priorities and hypoxia management are stated under the national reports that Jordan submits to the international environmental conventions. Per Jordan's NDC the National Water Strategy (2016- 2025) incorporates provisions for climate change, water-energy-food nexus, sustainability of overexploited groundwater resources, the adoption of new technologies including decentralized wastewater management, and reuse of treated wastewater, as well as commercialization and consolidation of wastewater services and increasing private sector participation. The strategy considers the Sustainable Development Goals and is aligned with "Jordan 2025, A National Vision and Strategy". Also, per Jordan's NDC (page 34): Water quality: lower precipitation and higher temperature will mean that salinity in surface and groundwater will rise. Therefore, desalination will be increasingly required for domestic water supplies. Lastly and also based on Jordan's NDC (page 35): Water utilities (wastewater treatment plants, water desalination plants and water distribution utilities) constitute major elements of the water resource management scope in Jordan and enhancing their effective performance and resilience to climate change impacts is a priority for strengthening the adaptive capacity of the whole sector.
Madagascar	In 1999, Madagascar adopted Decree 99-954 requiring environmental and social management plans for all investments. The Law on the Development of Industry advocates for the adoption by the industrial sector of Transfer of Environmentally Sound Technologies (TEST) as an integrated approach that provides industries and SMEs with a combined set of tools to initiate a cycle of continuous improvements of business operations for a transition towards sustainable production. In 2002, the management of coastal zone pollution and hypoxia was integrated into the Environmental Action Plan. This later aimed to implement pollution reduction plans and observatories. Since 2008, marine pollution has been considered a national priority regarding chemicals' rational management. The National Pollution Management Strategy (2010) recognized that the contamination of waterways, land-based pollution, municipal waste, and the use of POP pesticides have repercussions on ecosystems, population well-being, and national economy. In the same perspective, the National Blue Economy Strategy (NBES), that was technically validated in early 2023, aims at minimizing environmental and resource pollution by hydrocarbons, plastics, organic and chemical pollutants, and waste of all kinds. In addition, and in line with the NBES, Madagascar also established in 2023 its national action plan on prevention and reduction of sea-based marine plastic litter (SBMPL). Law 2018-025 requires impact assessment considering the cumulative effects of maritime activities, and the implementation of the blue economy in any investment ahead of the exploitation of maritime zones. Other commitments documents for the implementation of multilateral environmental agreements contribute to conserve Madagascar's marine ecosystems. The National Biodiversity Strategy and Action Plan (2010), the new Environmental Charter (2015), the Protected Areas Management Code, the Water Code (2015), the revised Forestry Policy (2017), the ratification of MARPOL Annex VI (2017), the National Strategy for Energy Wood Supply (2018), the National Action Program on Climate Change (2019), the Second National Determined Contribution (2022), etc. contain activities that contribute to reduce the degradation of Madagascar's marine ecosystems.
Maldives	The approach to be taken in the child project is multi-sector and multi-threat, and builds on existing government strategies, including the overarching National Strategic Action Plan, and specific National Biodiversity Strategy, National Waste Strategy, National Fisheries, Agriculture and Food Strategy (recognizing vulnerability to extremely high share of food import), National Water and Wastewater Strategy among others. While nitrogen and nutrient pollution are especially relevant to the Sustainable Development Goal (SDG) Target 14.1, the integrated approach recognizes that nitrogen pollution links multiple SDGs. The Maldives alongside the other 15 government partner institutions already signed the BoB LME SAP in 2015. Since then, the leadership of the Maldives has been illustrated by its hosting of the Malé Workshop with SACEP and the GEF/UNEP project Towards the International Nitrogen Management System (INMS), which led to UNEA Resolution 4/14. Maldives was a signatory of the Colombo Declaration (embracing the ambition to 'halve nitrogen waste' by 2030) and co-sponsored the UNEA Resolution 5/2. These provide the starting point for further action in the child project, including strengthening the Maldives contribution to the first ever 'South Asia Roadmap for Sustainable Nitrogen Management'. In following up the UNEA 4/14 and 5/2 resolutions, which it helped lead, the Maldives has benefited from the cooperation across South Asia through the GCRF South Asian Nitrogen Hub (SANH) to develop and launch (November 2022 by the Vice President of the Maldives) its first ever National Nitrogen Policy Report, which recognizes coastal pollution as a priority. This is now being used across ministries to inform the Maldives National Nitrogen Action Plan, to be developed as part of the proposed project.
Mexico	Promoting a sustainable ocean economy is a top national priority in Mexico. In 2018, Mexico established as an Inter-ministerial Commission for the Sustainable Management of Oceans and Coastal Areas to drive policies for healthier coastal

	zones. Specifically, it focuses on reducing coastal pollution through a strategy that integrates climate-smart actions and NbS in its latest Implementation Strategy for a Sustainable Ocean Economy (2021-2024). Mexico is a member of the High-Level Panel for a Sustainable Ocean Economy (Ocean Panel) in which it participates to assert its commitment to accelerate actions to reduce coastal pollution. Concurrently, Mexico's National Development Plan 2019-2024 identifies the Program for the Development of the Isthmus of Tehuantepec as a Development Project, encompassing the development of the Interoceanic Corridor of the Isthmus of Tehuantepec (CIIT for its acronym in Spanish, see Annex 4 for CIIT details). These investments are aimed at fostering regional economic growth within the Isthmus of Tehuantepec region. The proposed project seeks to complement and enhance the CIIT investments, particularly aligning with one of the five priority objectives of the CIIT, namely '—to increase biodiversity and improve the quality of water, soil, and air with a sustainable approach.' Mexico's engagement in addressing hypoxic zones across the GoM, CLME, and PACA LMEs significantly strengthens the CHO IP's global mission and overarching objectives. Focusing on the Isthmus of Tehuantepec and Yucatan Peninsula region, Mexico plans to counter upstream municipal, agricultural, and industrial pollution sources affecting LMEs through enhanced governance and policy frameworks, improved landscape management, deployment of Nature-based Solutions (NbS), and strategic investments in infrastructure improvement.
Moldova	Numerous policies and strategies underscore the national commitment to addressing marine pollution and hypoxia, cutting across various sectors. These include the Dniester River Basin District Management Plan, the National Development Strategy Moldova 2030, the National Environment Strategy 2014 – 2023, the Water Supply and Sanitation Strategy 2014 – 2030, the National Programme for the Implementation of the Protocol on Water and Health for 2016 and 2025, and the National Forest Extension and Rehabilitation Program 2023 – 2032 (NFERP). Moreover, Moldova and Ukraine have jointly established the Dniester Commission and the Strategic Action Programme (SAP) for the Dniester River Basin, demonstrating regional cooperation.
Panama	Panama's geographic location within two important Large Marine Ecosystems (Pacific Central American Coastal and Caribbean Sea) is unique as an isthmus separating the Pacific Ocean and the Caribbean. Additionally, Panama is part of both Wider Caribbean Region (WCR) initiatives in the Caribbean and the Eastern Pacific Tropical Corridor (CMAR) in the Pacific, serving as initiative Secretariat in the latter. The main environmental challenge in the country is the maintenance of an adequate water supply in terms of quantity and quality, which faces environmental threats created by agricultural run-off, livestock manure, soil erosion, poor waste water management and deforestation, that can sustain ecosystem and human needs (more detail described in section 2.a). This is exacerbated by increased climate variability and slow-onset climate change effects, leading to decreased water availability and increased water stress. Panama has thorough sectoral frameworks, policies and corresponding programs related to water management, agriculture, and the environment, as detailed in Annex I. As enforcement is affected by individual lack of capacities and resources within each specific topic, there is a need for developing experiences that integrate action across productive and protected landscapes and different stakeholders. This will lead to increased impact at scale and generate efficiencies (both financial and technical). This projects aim is to use this approach on prioritized watersheds in Parita Bay, a mostly rural-agricultural area on the country´s central Pacific coast, to curb coastal pollution from agricultural runoff through improved agricultural practices, capacity building and monitoring, and better coordination and planning among stakeholders across the landscape. The model can then be replicated across additional landscapes or watersheds in Panama, as well as in other countries of the region which face similar institutional challenges. Panama has a robust legal and policy framework addressing water pollution (Annex I) —sanitation and water discharge —and indirectly coastal pollution and hypoxia. However, compliance and adoption of these frameworks has been challenging, thus this project's aim is to strengthen local and regional governments' implementation, enforcement capacities and producers and communities' participation, which play a key role in advancing more sustainable production systems. Panama's legislation includes provisions for watershed management, gender inclusion and recognition of differentiated impacts of climate change on women The country developed its National Gender and Climate Change Plan (PNGCC) in 2021 to incorporate gender in the NDCs, policies, strategies, and programs at the national level, which will be very relevant for the project Among other things, the plan will help ensure greater access for women as multipliers of environmentally friendly initiatives to technical and financial resources and decision-making processes that enable full equality for women. By creating watershed committees, Panama improved water resource management and watershed governance and decentralized environmental management. These committees will be the platforms for this project´s approaches that will be co-created with local stakeholders through workshops and facilitation meetings, establishing inclusive landscape planning and BMPs' implementation. Panama is currently developing its National Adaptation Plan, Nature-based Solutions (NbS) guidelines, and green taxonomies; as well as water quality standards for water discharge in coastal-marine ecosystems, including nation-wide projects such as Panama Bay Sanitation Program, Sanitary Project of Panama Oeste, and Panama's Water and Sanitation Project.
Peru	Peru approved the National Solid Waste Management Plan for 2016 – 2024 focusing on the improving waste management, particularly at local government level. In 2021, the country adopted a new National Environmental Policy aimed at halting environmental quality decline, biodiversity loss, and enhancing environmental governance. In 2022, Peru presented a proposal to UNEA 5.2 for negotiating legally binding international agreement targeting plastic pollution. Currently, Peru is implementing an Environmental Action Plan (PAE) in conjunction with the Humboldt II GEF project. This initiative is particularly pertinent to the Peru-Chile binational cabinet's agenda and priorities pollution reduction. Peru is strengthening its

	marine-coastal environmental management through the consultation of the "Multisectoral Commission for Environmental Management of the Coastal-Marine Environment (COMUMA).
Sri Lanka	National polices that focus on marine and coastal pollution include Sri Lanka Coastal Zone and Coastal Resource Management Plan (2018); National Environmental Action Plan (2022); Marine Environment Protection Authority Strategic Plan (2022-2025); National Agricultural Policy (2007), and the National Policy on Waste Management (2020). Regulations made under the National Environment Act No. 47 of 1980 (Gazette Extraordinary No. 2264/17 of 2022) provides guidance to mitigate discharge to marine environment. Sri Lanka proposed the international Resolution on Sustainable Nitrogen Management in 2022, with the aim of halving nitrogen waste by 2030. Commitments to reducing coastal and marine pollution by Sri Lanka are included in a number of global and regional engagements. These include the South Asian Seas Programme; United Nations Global Nitrogen Challenge; Global Wastewater Initiative; Global Partnership on Nutrient Management; Bay of Bengal Large Marine Ecosystem project (as detailed in the Strategic Action Programme); Indian Ocean Tuna Commission and the South West Indian Ocean Fisheries Commission; Convention on Biological Diversity; and the Bay of Bengal Intergovernmental Organization.
St. Kitts and Nevis	SKN has a Marine Spatial Plan, are in the process of implementing its statutory marine zoning framework and marine zoning plan and has developed Waste Management Plans. The proposed project is aligned with the National Conservation Environment Protection Act, the National Environmental Management Strategy and the National Physical Development Plan and the Nevis Physical Development Plan, Solid Waste Management Act of 2009, as well as the National Ocean Policy. The latter states that "Characterization of the impacts of marine pollution on the health of the marine ecosystems and water quality is needed to guide management decisions and help improve wastewater management practices," which the proposed project is directly addressing. The Fisheries, Aquaculture and Marine Resources Act (2016) and the Nevis Physical Planning and Development Regulations are also relevant to this project. Waste Management Plans have been developed for SKN, and hence the actions presented in this document are tailored to address the identified gaps to implement or finance these plans.
Thailand	Thailand already boasts of relevant policies that focuses on water and coastal pollution, demonstrating the country's commitment in tackling land-based pollution. At regional and national level, Thailand actively participates in several environmental initiatives, commitments, and programs including the Convention on Biological Diversity which recently adopted the Kunming-Montreal Global Biodiversity Framework which has a provision on addressing nutrient pollutions, the United Nations with the Sustainable Development Goal commitments, UN Environment Programme, the Association of South East Asian Nations (ASEAN), and the Coordinating Body on the Seas of East Asia (COBSEA), including in the formulation of the draft amongst others. The Pollution Control Department (PCD) within the Ministry of Natural Resources and Environment establishes the standards, guidance, and measure on water quality for the country. They are the main agency responsible for managing pollution and communicating this with other national and local agencies who have more specific, sectoral mandate. For instance, PCD communicates with the Department of Industrial Works on water pollution regarding hotels and infrastructure, they communicate with the Ministry of Agriculture and Cooperatives for agricultural-related waste, and finally they coordinate with the Marine Department regarding wastes from ships, harbors, and ports. PCD also monitors point source pollution across the different sectors and ensures compliance.
Trinidad and Tobago	The country has strategically aligned with global and regional environmental protection and sustainability commitments. Being an active signatory to the Paris Agreement since 2015, a party to the Convention on Biological Diversity and its pursuit of the Sustainable Development Goals underscores its commitment to mitigating and adapting to climate change impacts and circumventing biodiversity loss and pollution. Regionally, Trinidad and Tobago actively engage with initiatives and agreements to safeguard the Caribbean Sea and its ecosystems. The nation's participation in ventures such as the Cartagena Convention and its subsidiary protocols, such as the Land-based Sources (LBS) Protocol, reflects its commitment to regional cooperation in addressing marine and coastal challenges. At the national level, the country has established a robust legislative framework to address environmental challenges. The Environmental Management Act (2000) (EM Act) serves as a foundational piece of legislation for environmental protection, regulating activities with environmental impacts, including waste management. Their commitment to international agreements is enshrined in the codified legislature, which empowers the Environmental Management Authority (EMA) to implement the Ramsar Convention, ensuring that Ramsar sites like the Caroni Swamp are protected and conserved. Furthermore, there are comprehensive policy frameworks to tackle environmental challenges. The National Development Strategy 2030; the National Environment Policy, 2018; the Integrated Coastal Zone Management Policy (ICZM) 2019; the National Biodiversity Strategy and Action Plan (2017-2022); the Integrated Solid Waste/Resource Management Policy for Trinidad and Tobago (2013), Wetlands Policy (2002), the Draft National Integrated Water Resource Management Policy, 2022, and the Water Pollution Rules, 2019 (WPR). These policies provide a robust foundation for addressing critical issues like water quality management and waste reduction. Moreover, the program's emphasis on nature-based solutions (NbS) dovetails harmoniously with Trinidad and Tobago's commitment to conserving the Caroni Swamp. The nation recognizes the intrinsic value of NbS to restore and protect coastal ecosystems.
Venezuela	Venezuela has elaborated a regulatory framework which constitutes an enabling environment including the Coastal Zone Law[1][1] (CZL), which regulates the management of Venezuelan coastal zones under conservation and sustainable use

	approach. It establishes that the basins management, conservation and sustainable use must be focused in mitigation of erosion effects, and in the control of sediment, nutrient and pollutant flows from the watersheds to the coastal zones. The CZL principles are aligned with the concept of Source to Sea interlinkages, suggested by GEF. In the context of CZL, projects have been carried out to train stakeholders; restore coastal zones; strengthening the Venezuelan system of protected areas in coastal zones, with the support of GEF and UNDP; and multi-stakeholder committees were created. The CZL Committee for Maracaibo Lake has been working for more than 12 years, particularly in the management of beaches and wetlands. In 1981, the Institute for the Control and Conservation of the Maracaibo Lake Basin (ICLAM) was created by law. The ICLAM carries out research, works, plans, and projects for the conservation and integral use of the lake-basin system. Due to the negative effects of lake pollution, the national government created in July 2023 the Presidential Commission for the Conservation and Sustainable Development of the Maracaibo Lake Basin (PCCSDMLB) to reverse environmental deterioration by controlling polluting sources and promoting sustainable production models. The PCCSDMLB includes ministries of relevant sectors, regional and local governments, universities, private sector and community-based organizations. This commission has established a master plan including financial investments.
Vietnam	Relevant polices and decrees include the National Water Resources Strategy (2021-2030); the National Green Growth Strategy vision towards 2050; Decree 43/2015/ND-CP on management of water source protection corridors (2015); Directive 34/CT-TTg on water sources, water supply works, and clean water production on collection and storage of waste generated in agricultural activities. Vietnam has made numerous commitments relevant to this project, including membership of partnerships and platforms, namely: Partnerships in Environmental Management for the Seas of East Asia; Southeast Asian Fisheries Development Centre; North West Pacific Action Plan; and the Coordinating Body on the Seas of East Asia.

Child Project Selection Criteria

268. The Call for Expression of Interest (EOIs) from countries to participate in the GEF-8 Clean and Healthy Oceans Integrated Program (CHO IP) was announced by the GEF Secretariat on July 24, 2023, with a submission deadline of September 8, 2023.

269. The Secretariat received eligible EOIs from 18 countries. A Clean and Healthy Ocean (CHO) IP country EOI review template was developed based on the CHO IP country EOI template . Each EOI was carefully assessed in accordance with the specific eligibility criteria detailed in the document GEF/C.62/Inf.13.

270. The country EOI review template consisted of a qualitative 1-4 scoring (1 being the weakest and 4 being the strongest) based on the questions in the CHO IP country EOI template. Two of the questions on criteria alignment (Question #7) and overall proposed framework (Question #11) were given an additional weight (x3) in the scoring. Optional comments can also be provided. This resulted in a total score per country EOI. Additionally, an overall qualitative assessment is made for each country EOI on its being recommended for inclusion in the
CHO IP: Yes / Maybe / No.

271. Countries were selected based upon criteria, including ability to demonstrate potential for contributing to a robust portfolio, which capitalizes on opportunities where: GEF interventions may have the most significant global impact addressing marine hypoxia based on scientific knowledge, including, but not limited to, SIDS and LDCs and within high-risk LMEs; established political leadership to address hypoxia and related issues, ability to leverage significant additional funding, an openness among stakeholders to pilot innovative approaches, ability to coordinate diverse sectors (agriculture, industrial/municipal) to address cumulative impacts, and private sector willingness to invest in and seek meaningful reforms; and, cooperative management and learning among and between countries contributing to or managing pollution loads in LMEs, including through processes such as the Transboundary Diagnostic Analysis - Strategic Action Programme (TDA - SAP) approach[136]

272. A CHO IP country EOI review committee was established with one representative from the following organizations: GEF Secretariat, STAP, Lead Agency, and an external reviewer. The scoring of EOIs using the country EOI review template was done independently by each reviewer starting on September 11, 2023. The co-lead agencies (FAO, ABD, EBRD, and CAF) as well as additional staff within GEF Sec and STAP combined individual assessments, but only one representative for each organization group sat on the committee. GEF Agencies that were identified as the lead agency on a country EOI recused themselves from discussing, reviewing, or recommending the respective country EOIs, including in the committee deliberations. The CHO IP country EOI review committee consisted of the following individuals:

- GEF Secretariat
- STAP
- Lead Agency: FAO GEF Agency
- External Reviewer: Intergovernmental Oceanographic Commission of UNESCO and Technical Secretary of the IOC Global Ocean Oxygen Network (GO2NE) expert working group

273. The individual total scores and overall assessment from the country EOI review template for each organization on the CHO IP country EOI review committee was combined into a summary sheet to inform a discussion. The discussion was also informed by prioritizing global hypoxia hotspots based on latest scientific knowledge as well as additional factors like striving for a balance of geographic and agency distribution.

274. The CHO IP country EOI review committee met virtually on September 19, 2023 and the discussion resulted in a consensus of country EOIs to be included in the CHO IP. This consensus served as final recommendation to the GEF CEO for decision. The GEF Secretariat prepared this summary report of the discussions and shared this with the CHO IP country EOI review committee for a no objection and subsequent submission to the GEF Senior Management for a final decision.

275. Based on the assessments and scoring of each member, the committee agreed on three tiers and designated each EOI into one of these tiers. After the three tiers were populated, the committee also considered geographical balance and agency distribution for the final recommendation. These two factors were important, yet they did not necessarily affect a high-quality proposal or favor a poor-quality proposal. Additionally, the Tier 2 EOIs were also ranked within the tier to provide an opportunity for additional individual EOIs to be considered by GEF Senior Management.

276. The result is a CHOIP that will engage fourteen (14) countries, nine (9) GEF agencies, and representing nine (9) LMEs. Each Child Project will contribute to the achievement of the overall goal and will advance solutions to address fundamental barriers through a shared set of complimentary components, outputs, and activities adapted to local conditions and targeting national priorities. The GCP will support the cohort of CP's to help ensure effectiveness and amplified impact while advancing and accelerating transformational change at both global and regional levels.

Clean and Healthy Ocean IP - Country EOI Review Tempalte

Country		Total Score	
Agency			

Instructions:
Complete the below template for each country EOI. Enter a score (1 - 4) in Column E for the respective question in Column C. Optional comments can be added in Column F. Scores will be summed for a total score, with the criteria alignment (Question #7) and overall proposed framework (Question #11) given additional weight (x3). At the end, please answer the final overall assessment question in the orange box directly below these instructions (cell D11).

Individual scores will be compiled per country to guide overall IP country selection discussions. Please complete this template independently from other reviewers. CHO IP Lead Agencies must recuse themselves from reviewing any country EOI where they are identified as providing an IA or EA role.

Unless stated otherwise in Column D, ratings should be made based on how the EOI demonstrates a technical understanding of national context for the respective question in achieving the IP goals and/or the strength of the issue/project design element incorporated into the proposal.

Overall EOI assessment: Do you recommend this EOI be included in the Clean and Healthy Ocean IP? *(Select from drop down menu to right)*	

Part 1: Country context and rationale

No.	Questions	Score range	Score	Optional comments
1	**Justification:** State why country inclusion will substantially contribute to achievement of the CHO IP's overall global objective.	1: Weak 2: Fair 3: Good 4: Strong		
2	**Environmental Challenges:** (a) Describe land-based pollution sources responsible for coastal ecosystem degradation, eutrophication, and hypoxia and associated environmental, social, and economic impacts; (b) Summarize trends and forecast impacts to coastal and marine ecosystems if identified environmental challenges are not addressed.	1: Weak 2: Fair 3: Good 4: Strong		
3	**Root Causes:** Describe the root causes that result in land-based pollution sources continuing to contribute to coastal zone ecosystem degradation, eutrophication, and hypoxia.	1: Weak 2: Fair 3: Good 4: Strong		
4	**Barriers:** Describe the reasons or barriers that hinder the country's ability to address identified root causes of on-going land-based pollution impacts to coastal marine environments.	1: Weak 2: Fair 3: Good 4: Strong		
5	**Enabling Environment:** Describe with examples national-level strategies, policies, regulations, investments, governance systems and/or actions that show reducing coastal zone pollution and hypoxia are national priorities.	1: Weak 2: Fair 3: Good 4: Strong		
6	**Global and Regional Engagement:** List and describe country's engagement in relevant agreements and platforms demonstrating commitment to addressing land-based pollution, conservation of coastal zone ecosystem health, and/or conservation of Large Marine Ecosystems.	1: Weak 2: Fair 3: Good 4: Strong		

Part 2: Criteria for Child Project

No.	Questions	Score range	Score	Optional comments
7	How closely is the country EOI aligned with the Oceans IP criteria as it is listed in the Country EOI template? (links below)	1: Weak 2: Fair 3: Good 4: Strong		

https://www.thegef.org/documents/expression-interest-templates-gef-8-integrated-programs

Part 3: Target Geographies

No.	Questions	Score range	Score	Optional comments
8	**Location:** Identify the target location(s), including upstream watersheds and large marine ecosystem(s) with which the intervention is associated.	Not a scoring criterion.		
9	**Global Importance and Scientific Justification:** Explain global importance of selected geography to the CHO IP objective, including if possible reference to indicative scientific papers, findings, or reports.	1: Weak 2: Fair 3: Good 4: Strong		
10	**Target Pollution Sectors:** Describe the land-based pollution sources to be targeted in this geography and a brief rationale or justification for prioritization	1: Weak 2: Fair 3: Good 4: Strong		

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Footnotes CHO IP ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES:

[135] https://www.thegef.org/documents/expression-interest-templates-gef-8-integrated-programs

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment

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

Yes

Stakeholder Engagement

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

Yes

Were the following stakeholders consulted during PFD preparation phase:

Indigenous Peoples and Local Communities:

Civil Society Organizations :

Private Sector :

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

277. As noted, a comprehensive stakeholder engagement process inclusive of the GCP and Child Projects will be completed during the PPG phase (please refer to the *brief summary of stakeholder engagement conducted during the EIO and Concept Note preparation process between June and October of 2023* table in paragraph 87).

278. For the GCP: Throughout the EOI and PFD process a host of conversations and consultations were conducted with agencies, countries, key stakeholders and key stakeholder organizations, including representative CSOs such as the GWP. A two-day workshop was convened in London, UK at the offices of EBRD on October 9 – 10.

279. Please see each of the national Child Project Concept Notes attached for more details regarding stakeholder engagement and engagement strategies.

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

Private Sector

Will there be private sector engagement in the program?

Yes

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

Yes

Environmental and Social Safeguards

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed 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 Program 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	GEF Program Financing ($)	Agency Fee($)	Total GEF Financing ($)
FAO	GET	Viet Nam	Biodiversity	BD STAR Allocation: IPs	882,816.00	79,453.00	962,269.00
FAO	GET	Viet Nam	International Waters	International Waters: IW IP Contributions	2,648,447.00	238,360.00	2,886,807.00
FAO	GET	Viet Nam	Biodiversity	BD IP Matching Incentives	294,272.00	26,484.00	320,756.00
FAO	GET	Venezuela	Biodiversity	BD STAR Allocation: IPs	2,401,958.00	216,176.00	2,618,134.00
FAO	GET	Venezuela	Land Degradation	LD STAR Allocation: IPs	746,676.00	67,200.00	813,876.00
FAO	GET	Venezuela	Climate Change	CC STAR Allocation: IPs	1,349,415.00	121,447.00	1,470,862.00
FAO	GET	Venezuela	International Waters	International Waters: IW IP Contributions	1,574,318.00	141,688.00	1,716,006.00

FAO	GET	Venezuela	Biodiversity	BD IP Matching Incentives	800,652.00	72,058.00	872,710.00
FAO	GET	Venezuela	Land Degradation	LD IP Matching Incentives	248,892.00	22,400.00	271,292.00
FAO	GET	Venezuela	Climate Change	CC IP Matching Incentives	449,805.00	40,482.00	490,287.00
CAF	GET	Venezuela	Biodiversity	BD STAR Allocation: IPs	2,401,958.00	216,176.00	2,618,134.00
CAF	GET	Venezuela	Land Degradation	LD STAR Allocation: IPs	746,676.00	67,200.00	813,876.00
CAF	GET	Venezuela	Climate Change	CC STAR Allocation: IPs	1,349,415.00	121,447.00	1,470,862.00
CAF	GET	Venezuela	International Waters	International Waters: IW IP Contributions	1,574,318.00	141,688.00	1,716,006.00
CAF	GET	Venezuela	Biodiversity	BD IP Matching Incentives	800,652.00	72,058.00	872,710.00
CAF	GET	Venezuela	Land Degradation	LD IP Matching Incentives	248,892.00	22,400.00	271,292.00
CAF	GET	Venezuela	Climate Change	CC IP Matching Incentives	449,805.00	40,482.00	490,287.00
FAO	GET	Sri Lanka	International Waters	International Waters: IW IP Contributions	2,652,294.00	238,706.00	2,891,000.00
FAO	GET	Global	International Waters	International Waters: IW IP Global Platforms	7,480,694.00	673,262.00	8,153,956.00
ADB	GET	Global	Chemicals and Waste	CW IP Global Platforms	1,494,275.00	134,485.00	1,628,760.00
CAF	GET	Global	Chemicals and Waste	CW IP Global Platforms	1,494,275.00	134,485.00	1,628,760.00
EBRD	GET	Global	Chemicals and Waste	CW IP Global Platforms	1,494,275.00	134,485.00	1,628,760.00
FAO	GET	Global	Chemicals and Waste	CW IP Global Platforms	488,773.00	43,989.00	532,762.00
EBRD	GET	Jordan	International Waters	International Waters: IW IP Contributions	2,652,294.00	238,706.00	2,891,000.00

CI	GET	St. Kitts and Nevis	International Waters	International Waters: IW IP Contributions	2,652,294.00	238,706.00	2,891,000.00
IADB	GET	Panama	International Waters	International Waters: IW IP Contributions	2,927,523.00	263,477.00	3,191,000.00
UNEP	GET	Maldives	International Waters	International Waters: IW IP Contributions	3,680,640.00	331,258.00	4,011,898.00
UNEP	GET	Maldives	Chemicals and Waste	CW IP Contributions	297,800.00	26,802.00	324,602.00
CI	GET	Grenada	Biodiversity	BD STAR Allocation: IPs	1,247,345.00	112,261.00	1,359,606.00
CI	GET	Grenada	Climate Change	CC STAR Allocation: IPs	534,576.00	48,112.00	582,688.00
CI	GET	Grenada	Biodiversity	BD IP Matching Incentives	415,782.00	37,420.00	453,202.00
CI	GET	Grenada	Climate Change	CC IP Matching Incentives	178,192.00	16,037.00	194,229.00
CI	GET	Grenada	International Waters	International Waters: IW IP Contributions	2,672,882.00	240,559.00	2,913,441.00
UNEP	GET	Thailand	International Waters	International Waters: IW IP Contributions	3,061,009.00	275,491.00	3,336,500.00
UNDP	GET	Mexico	Biodiversity	BD STAR Allocation: IPs	8,076,881.00	726,919.00	8,803,800.00
UNDP	GET	Mexico	Biodiversity	BD IP Matching Incentives	2,692,294.00	242,306.00	2,934,600.00
UNDP	GET	Mexico	International Waters	International Waters: IW IP Contributions	2,692,294.00	242,306.00	2,934,600.00
World Bank	GET	Moldova	Biodiversity	BD STAR Allocation: IPs	894,790.00	80,531.00	975,321.00
World Bank	GET	Moldova	Biodiversity	BD IP Matching Incentives	298,263.00	26,844.00	325,107.00
World Bank	GET	Moldova	Climate Change	CC STAR Allocation: IPs	787,415.00	70,867.00	858,282.00
World Bank	GET	Moldova	Climate Change	CC IP Matching Incentives	262,471.00	23,622.00	286,093.00
World Bank	GET	Moldova	Land Degradation	LD STAR Allocation: IPs	1,896,955.00	170,725.00	2,067,680.00

World Bank	GET	Moldova	Land Degradation	LD IP Matching Incentives	632,317.00	56,909.00	689,226.00
World Bank	GET	Moldova	International Waters	International Waters: IW IP Contributions	3,131,764.00	281,858.00	3,413,622.00
UNDP	GET	Peru	Biodiversity	BD STAR Allocation: IPs	5,395,496.00	485,595.00	5,881,091.00
UNDP	GET	Peru	Biodiversity	BD IP Matching Incentives	1,798,498.00	161,865.00	1,960,363.00
UNDP	GET	Peru	International Waters	International Waters: IW IP Contributions	2,697,749.00	242,797.00	2,940,546.00
UNEP	GET	Trinidad and Tobago	International Waters	International Waters: IW IP Contributions	3,061,009.00	275,491.00	3,336,500.00
UNDP	GET	Madagascar	Biodiversity	BD STAR Allocation: IPs	4,844,420.00	435,998.00	5,280,418.00
UNDP	GET	Madagascar	Land Degradation	LD STAR Allocation: IPs	695,608.00	62,605.00	758,213.00
UNDP	GET	Madagascar	Climate Change	CC STAR Allocation: IPs	496,863.00	44,718.00	541,581.00
UNDP	GET	Madagascar	International Waters	International Waters: IW IP Contributions	3,577,417.00	321,967.00	3,899,384.00
UNDP	GET	Madagascar	Biodiversity	BD IP Matching Incentives	1,614,807.00	145,332.00	1,760,139.00
UNDP	GET	Madagascar	Land Degradation	LD IP Matching Incentives	231,869.00	20,868.00	252,737.00
UNDP	GET	Madagascar	Climate Change	CC IP Matching Incentives	165,621.00	14,906.00	180,527.00
Total GEF Resources ($)						**9,030,469.00**	**109,369,160.00**

Project Preparation Grant (PPG)

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	PPG($)	Agency Fee($)	Total PPG Funding($)
FAO	GET	Viet Nam	Biodiversity	BD STAR Allocation: IPs	34,615.00	3,116.00	37,731.00

FAO	GET	Viet Nam	International Waters	International Waters: IW IP Contributions	103,847.00	9,346.00	113,193.00
FAO	GET	Viet Nam	Biodiversity	BD IP Matching Incentives	11,538.00	1,038.00	12,576.00
FAO	GET	Venezuela	Biodiversity	BD STAR Allocation: IPs	47,584.00	4,282.00	51,866.00
FAO	GET	Venezuela	Land Degradation	LD STAR Allocation: IPs	14,793.00	1,331.00	16,124.00
FAO	GET	Venezuela	Climate Change	CC STAR Allocation: IPs	26,733.00	2,405.00	29,138.00
FAO	GET	Venezuela	International Waters	International Waters: IW IP Contributions	31,188.00	2,806.00	33,994.00
FAO	GET	Venezuela	Biodiversity	BD IP Matching Incentives	15,861.00	1,427.00	17,288.00
FAO	GET	Venezuela	Land Degradation	LD IP Matching Incentives	4,931.00	444.00	5,375.00
FAO	GET	Venezuela	Climate Change	CC IP Matching Incentives	8,911.00	801.00	9,712.00
CAF	GET	Venezuela	Biodiversity	BD STAR Allocation: IPs	47,584.00	4,282.00	51,866.00
CAF	GET	Venezuela	Land Degradation	LD STAR Allocation: IPs	14,793.00	1,331.00	16,124.00
CAF	GET	Venezuela	Climate Change	CC STAR Allocation: IPs	26,733.00	2,405.00	29,138.00
CAF	GET	Venezuela	International Waters	International Waters: IW IP Contributions	31,188.00	2,806.00	33,994.00
CAF	GET	Venezuela	Biodiversity	BD IP Matching Incentives	15,861.00	1,427.00	17,288.00
CAF	GET	Venezuela	Land Degradation	LD IP Matching Incentives	4,930.00	443.00	5,373.00
CAF	GET	Venezuela	Climate Change	CC IP Matching Incentives	8,910.00	801.00	9,711.00
FAO	GET	Sri Lanka	International Waters	International Waters: IW IP Contributions	100,000.00	9,000.00	109,000.00
FAO	GET	Global	International Waters	International Waters: IW IP Global Platforms	170,000.00	15,300.00	185,300.00
ADB	GET	Global	Chemicals and Waste	CW IP Global Platforms	36,000.00	3,240.00	39,240.00

CAF	GET	Global	Chemicals and Waste	CW IP Global Platforms	36,000.00	3,240.00	39,240.00
EBRD	GET	Global	Chemicals and Waste	CW IP Global Platforms	36,000.00	3,240.00	39,240.00
FAO	GET	Global	Chemicals and Waste	CW IP Global Platforms	22,000.00	1,980.00	23,980.00
EBRD	GET	Jordan	International Waters	International Waters: IW IP Contributions	100,000.00	9,000.00	109,000.00
CI	GET	St. Kitts and Nevis	International Waters	International Waters: IW IP Contributions	100,000.00	9,000.00	109,000.00
IADB	GET	Panama	International Waters	International Waters: IW IP Contributions	100,000.00	9,000.00	109,000.00
UNEP	GET	Maldives	International Waters	International Waters: IW IP Contributions	138,772.00	12,489.00	151,261.00
UNEP	GET	Maldives	Chemicals and Waste	CW IP Contributions	11,228.00	1,011.00	12,239.00
CI	GET	Grenada	Biodiversity	BD STAR Allocation: IPs	37,059.00	3,335.00	40,394.00
CI	GET	Grenada	Climate Change	CC STAR Allocation: IPs	15,883.00	1,429.00	17,312.00
CI	GET	Grenada	Biodiversity	BD IP Matching Incentives	12,352.00	1,112.00	13,464.00
CI	GET	Grenada	Climate Change	CC IP Matching Incentives	5,294.00	476.00	5,770.00
CI	GET	Grenada	International Waters	International Waters: IW IP Contributions	79,412.00	7,147.00	86,559.00
UNEP	GET	Thailand	International Waters	International Waters: IW IP Contributions	150,000.00	13,500.00	163,500.00
UNDP	GET	Mexico	Biodiversity	BD STAR Allocation: IPs	180,000.00	16,200.00	196,200.00
UNDP	GET	Mexico	Biodiversity	BD IP Matching Incentives	60,000.00	5,400.00	65,400.00
UNDP	GET	Mexico	International Waters	International Waters: IW IP Contributions	60,000.00	5,400.00	65,400.00
World Bank	GET	Moldova	Biodiversity	BD STAR Allocation: IPs	22,642.00	2,037.00	24,679.00

World Bank	GET	Moldova	Biodiversity	BD IP Matching Incentives	7,547.00	679.00	8,226.00
World Bank	GET	Moldova	Climate Change	CC STAR Allocation: IPs	19,925.00	1,793.00	21,718.00
World Bank	GET	Moldova	Climate Change	CC IP Matching Incentives	6,641.00	598.00	7,239.00
World Bank	GET	Moldova	Land Degradation	LD STAR Allocation: IPs	48,000.00	4,320.00	52,320.00
World Bank	GET	Moldova	Land Degradation	LD IP Matching Incentives	16,000.00	1,440.00	17,440.00
World Bank	GET	Moldova	International Waters	International Waters: IW IP Contributions	79,245.00	7,132.00	86,377.00
UNDP	GET	Peru	Biodiversity	BD STAR Allocation: IPs	109,091.00	9,818.00	118,909.00
UNDP	GET	Peru	Biodiversity	BD IP Matching Incentives	36,364.00	3,272.00	39,636.00
UNDP	GET	Peru	International Waters	International Waters: IW IP Contributions	54,545.00	4,909.00	59,454.00
UNEP	GET	Trinidad and Tobago	International Waters	International Waters: IW IP Contributions	150,000.00	13,500.00	163,500.00
UNDP	GET	Madagascar	Biodiversity	BD STAR Allocation: IPs	125,000.00	11,250.00	136,250.00
UNDP	GET	Madagascar	Land Degradation	LD STAR Allocation: IPs	17,949.00	1,615.00	19,564.00
UNDP	GET	Madagascar	Climate Change	CC STAR Allocation: IPs	12,820.00	1,154.00	13,974.00
UNDP	GET	Madagascar	International Waters	International Waters: IW IP Contributions	92,308.00	8,308.00	100,616.00
UNDP	GET	Madagascar	Biodiversity	BD IP Matching Incentives	41,667.00	3,749.00	45,416.00
UNDP	GET	Madagascar	Land Degradation	LD IP Matching Incentives	5,983.00	538.00	6,521.00
UNDP	GET	Madagascar	Climate Change	CC IP Matching Incentives	4,273.00	385.00	4,658.00
Total PPG Amount ($)					**2,750,000.00**	**247,487.00**	**2,997,487.00**

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total($)
FAO	GET	Viet Nam	Biodiversity	BD STAR Allocation	1,000,000.00
FAO	GET	Venezuela	Biodiversity	BD STAR Allocation	2,670,000.00
FAO	GET	Venezuela	Land Degradation	LD STAR Allocation	830,000.00
FAO	GET	Venezuela	Climate Change	CC STAR Allocation	1,500,000.00
CAF	GET	Venezuela	Biodiversity	BD STAR Allocation	2,670,000.00
CAF	GET	Venezuela	Land Degradation	LD STAR Allocation	830,000.00
CAF	GET	Venezuela	Climate Change	CC STAR Allocation	1,500,000.00
CI	GET	Grenada	Biodiversity	BD STAR Allocation	1,400,000.00
CI	GET	Grenada	Climate Change	CC STAR Allocation	600,000.00
UNDP	GET	Mexico	Biodiversity	BD STAR Allocation	9,000,000.00
World Bank	GET	Moldova	Biodiversity	BD STAR Allocation	1,000,000.00
World Bank	GET	Moldova	Climate Change	CC STAR Allocation	880,000.00
World Bank	GET	Moldova	Land Degradation	LD STAR Allocation	2,120,000.00
UNDP	GET	Peru	Biodiversity	BD STAR Allocation	6,000,000.00
UNDP	GET	Madagascar	Biodiversity	BD STAR Allocation	5,416,668.00
UNDP	GET	Madagascar	Land Degradation	LD STAR Allocation	777,777.00
UNDP	GET	Madagascar	Climate Change	CC STAR Allocation	555,555.00
Total GEF Resources					**38,750,000.00**

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing($)	Co-financing($)
Oceans IP	GET	3,825,535.00	45,450,000.00
Oceans IP	GET	15,143,432.00	99,500,000.00
Oceans IP	GET	2,652,294.00	20,000,000.00

Oceans IP	GET	12,452,292.00	251,070,000.00
Oceans IP	GET	2,652,294.00	21,000,000.00
Oceans IP	GET	2,652,294.00	4,117,471.00
Oceans IP	GET	2,927,523.00	43,870,000.00
Oceans IP	GET	3,978,440.00	35,000,000.00
Oceans IP	GET	5,048,777.00	4,484,522.00
Oceans IP	GET	3,061,009.00	1,070,000.00
Oceans IP	GET	13,461,469.00	89,750,000.00
Oceans IP	GET	7,903,975.00	52,500,000.00
Oceans IP	GET	9,891,743.00	42,000,000.00
Oceans IP	GET	3,061,009.00	5,600,000.00
Oceans IP	GET	11,626,605.00	32,650,000.00
Total Project Cost		**100,338,691.00**	**748,061,993.00**

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Natural Resources and Environment (MoNRE) - [Viet Nam]	In-kind	Recurrent expenditures	12,000,000.00
Recipient Country Government	Ministry of Agriculture and Rural Development (MARD)- [Viet Nam]	In-kind	Recurrent expenditures	8,000,000.00
GEF Agency	Climate Adaptive Integrated Flood Risk Management Project (through MARD (ADB-GCF managed)- [Viet Nam]	Loans	Investment mobilized	25,000,000.00
Others	Australia/DFAT (through FAO)- [Viet Nam]	Grant	Investment mobilized	300,000.00
GEF Agency	FAO- [Viet Nam]	In-kind	Recurrent expenditures	150,000.00

Recipient Country Government	MINEC - [Venezuela]	Public Investment	Investment mobilized	8,000,000.00
Recipient Country Government	Ministry of Water - [Venezuela]	Public Investment	Investment mobilized	8,000,000.00
Recipient Country Government	PDVSA - [Venezuela]	Public Investment	Investment mobilized	12,000,000.00
Recipient Country Government	Ministry of Agriculture - [Venezuela]	Public Investment	Investment mobilized	9,000,000.00
Recipient Country Government	Ministry of Industry - [Venezuela]	Public Investment	Investment mobilized	9,000,000.00
Recipient Country Government	Ministry of public works- [Venezuela]	Public Investment	Investment mobilized	9,000,000.00
Recipient Country Government	Ministry of Aquaculture and Fisheries- [Venezuela]	Public Investment	Investment mobilized	9,000,000.00
Recipient Country Government	Venezuelan Institute for Scientific Research (IVIC)- [Venezuela]	In-kind	Recurrent expenditures	3,000,000.00
Recipient Country Government	Universidad del Zulia- [Venezuela]	In-kind	Recurrent expenditures	3,000,000.00
Recipient Country Government	ICLAM- [Venezuela]	Public Investment	Investment mobilized	3,500,000.00
Recipient Country Government	HIDROLAGO- [Venezuela]	Public Investment	Investment mobilized	4,000,000.00
Recipient Country Government	Zulia state government- [Venezuela]	Public Investment	Investment mobilized	4,000,000.00
Recipient Country Government	Catatumbo Municipality Mayor’s office- [Venezuela]	In-kind	Recurrent expenditures	3,000,000.00

Recipient Country Government	Jesús María Semprúm Municipality Mayor's office- [Venezuela]	In-kind	Recurrent expenditures	3,000,000.00
Recipient Country Government	Rangel Municipality Mayor's office- [Venezuela]	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	Tovar Municipality Mayor's office- [Venezuela]	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	Alberto Adriani Municipality Mayor's office- [Venezuela]	In-kind	Recurrent expenditures	2,000,000.00
Recipient Country Government	Colón Municipality Mayor's office- [Venezuela]	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	Francisco Javier Pulgar Municipality Mayor's office- [Venezuela]	In-kind	Recurrent expenditures	2,000,000.00
Recipient Country Government	Maracaibo Municipality Mayor's office- [Venezuela]	In-kind	Recurrent expenditures	5,000,000.00
Recipient Country Government	National and district stakeholder institute - [Sri Lanka]	In-kind	Recurrent expenditures	10,000,000.00
Recipient Country Government	World Bank and Asian Development Bank funded ongoing and proposed projects- [Sri Lanka]	Loans	Investment mobilized	4,000,000.00
GEF Agency	FAO Sri Lanka Office implemented and pipeline projects- [Sri Lanka]	Grant	Investment mobilized	5,000,000.00
Private Sector	Private companies and banks- [Sri Lanka]	Other	Investment mobilized	1,000,000.00
GEF Agency	FAO - [Global GCP]	In-kind	Recurrent expenditures	150,000,000.00
GEF Agency	CAF -[Global GCP]	In-kind	Recurrent expenditures	3,000,000.00
GEF Agency	CAF - [Global GCP]	Loans	Investment mobilized	22,000,000.00

Others	UNESCO-IOC - [Global GCP]	In-kind	Recurrent expenditures	1,070,000.00
GEF Agency	ADB - [Global GCP]	Other	Investment mobilized	25,000,000.00
GEF Agency	EBRD - [Global GCP]	Loans	Investment mobilized	50,000,000.00
Others	EBRD - [Jordan]	Loans	Investment mobilized	21,000,000.00
GEF Agency	Conservation International - [St. Kitts and Nevis]	Grant	Investment mobilized	395,435.00
Recipient Country Government	St. Kitts and Nevis	Public Investment	Investment mobilized	3,637,036.00
GEF Agency	UNDP - [St. Kitts and Nevis]	In-kind	Recurrent expenditures	85,000.00
GEF Agency	Inter-American Development Bank - [Panama]	Loans	Investment mobilized	41,000,000.00
Donor Agency	UK blue carbon fund / Inter-American Development Bank - [Panama]	Grant	Investment mobilized	2,300,000.00
GEF Agency	Inter-American Development Bank - [Panama]	Grant	Investment mobilized	570,000.00
Recipient Country Government	Government of Maldives - [Maldives]	In-kind	Recurrent expenditures	20,000,000.00
Private Sector	Local & global private sector actors - [Maldives]	In-kind	Recurrent expenditures	8,000,000.00
Civil Society Organization	CSOs and other Non-Governmental Organizations (NGOs) - [Maldives]	In-kind	Recurrent expenditures	1,000,000.00
Beneficiaries	Maldives National University - [Maldives]	In-kind	Recurrent expenditures	900,000.00
Beneficiaries	Maldives National University - [Maldives]	In-kind	Recurrent expenditures	100,000.00
Others	National & international child project partners - [Maldives]	In-kind	Recurrent expenditures	5,000,000.00

Others	Green Climate Fund, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH - [Grenada]	Grant	Investment mobilized	3,250,000.00
Donor Agency	Conservation International - [Grenada]	In-kind	Recurrent expenditures	760,346.00
Others	Caribbean Biodiversity Fund - [Grenada]	Grant	Investment mobilized	300,176.00
Recipient Country Government	Recipient Country Government - [Grenada]	In-kind	Recurrent expenditures	174,000.00
Recipient Country Government	Thailand Pollution Control Department - [Thailand]	In-kind	Recurrent expenditures	1,000,000.00
Others	Coordinating Body on the Seas of East Asia - [Thailand]	In-kind	Recurrent expenditures	70,000.00
Recipient Country Government	Ministry of Agriculture and Rural Development (SADER) - [Mexico]	Public Investment	Investment mobilized	27,000,000.00
Recipient Country Government	Ministry of Agriculture and Rural Development (SADER) - [Mexico]	In-kind	Recurrent expenditures	3,000,000.00
Recipient Country Government	National Aquaculture and Fisheries Commission (CONAPESCA) - [Mexico]	Public Investment	Investment mobilized	9,000,000.00
Recipient Country Government	National Aquaculture and Fisheries Commission (CONAPESCA) - [Mexico]	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	National Forestry Commission (CONAFOR - [Mexico]	Public Investment	Investment mobilized	17,000,000.00
Recipient Country Government	National Forestry Commission (CONAFOR - [Mexico]	In-kind	Recurrent expenditures	2,000,000.00
Recipient Country Government	The Interoceanic Corridor of the Isthmus of Tehuantepec (CIIT) - [Mexico]	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	The National Water Commission (CONAGUA) - [Mexico]	In-kind	Recurrent expenditures	1,000,000.00

Recipient Country Government	The Secretariat for Home Affairs - [Mexico]	In-kind	Recurrent expenditures	100,000.00
Recipient Country Government	State of Chiapas - [Mexico]	Public Investment	Investment mobilized	800,000.00
Recipient Country Government	State of Chiapas - [Mexico]	In-kind	Recurrent expenditures	200,000.00
Recipient Country Government	State of Oaxaca - [Mexico]	Public Investment	Investment mobilized	800,000.00
Recipient Country Government	State of Oaxaca - [Mexico]	In-kind	Recurrent expenditures	200,000.00
Recipient Country Government	State of Veracruz - [Mexico]	Public Investment	Investment mobilized	800,000.00
Recipient Country Government	State of Veracruz - [Mexico]	In-kind	Recurrent expenditures	200,000.00
Recipient Country Government	State of Quintana Roo - [Mexico]	Public Investment	Investment mobilized	800,000.00
Recipient Country Government	State of Quintana Roo - [Mexico]	In-kind	Recurrent expenditures	200,000.00
Recipient Country Government	State of Campeche - [Mexico]	Public Investment	Investment mobilized	500,000.00
Recipient Country Government	State of Campeche - [Mexico]	In-kind	Recurrent expenditures	100,000.00
Private Sector	Fundación Gonzalo Rio Arronte - [Mexico]	Grant	Investment mobilized	1,000,000.00
Private Sector	Coca Cola Foundation - [Mexico]	Grant	Investment mobilized	400,000.00

Civil Society Organization	The Nature Conservacy - [Mexico]	Grant	Investment mobilized	2,000,000.00
Civil Society Organization	Sureste Sostenible A.C. - [Mexico]	Grant	Investment mobilized	900,000.00
Private Sector	Other - [Mexico]	Grant	Investment mobilized	20,000,000.00
GEF Agency	UNDP - [Mexico]	In-kind	Recurrent expenditures	250,000.00
GEF Agency	World Bank - [Moldova]	Loans	Investment mobilized	52,500,000.00
Recipient Country Government	Ministry of Environment (MINAM) - [Peru]	In-kind	Recurrent expenditures	3,780,000.00
Recipient Country Government	Ministry of Production (PRODUCE) - [Peru]	In-kind	Recurrent expenditures	2,100,000.00
Recipient Country Government	Environmental Evaluation and Oversight Agency (OEFA) - [Peru]	In-kind	Recurrent expenditures	2,100,000.00
Recipient Country Government	National Water Authority (ANA) - [Peru]	In-kind	Recurrent expenditures	2,100,000.00
Recipient Country Government	National Service of Natural Areas Protected by the State (SERNANP) - [Peru]	In-kind	Recurrent expenditures	2,940,000.00
Recipient Country Government	Peruvian Institute of the Sea (IMARPE) - [Peru]	In-kind	Recurrent expenditures	2,100,000.00
Recipient Country Government	Sub-National Governments (Municipalities of Chimbote and Pisco, and Regional Governments of Ancash and Ica) - [Peru]	Public Investment	Investment mobilized	25,200,000.00
Private Sector	Companies of fishing industry, mining, tourism, and others - [Peru]	Grant	Investment mobilized	1,260,000.00
GEF Agency	UNDP - [Peru]	In-kind	Recurrent expenditures	420,000.00

Recipient Country Government	Solid Waste Company of Trinidad and Tobago - [Trinidad and Tobago]	In-kind	Recurrent expenditures	650,000.00
Recipient Country Government	Ministry of Public Utilities- [Trinidad and Tobago]	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Ministry of Planning and Development- [Trinidad and Tobago]	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Environmental Management Authority- [Trinidad and Tobago]	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Institute of Marine Affairs- [Trinidad and Tobago]	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Department of Fisheries- [Trinidad and Tobago]	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	National Gas Company of Trinidad and Tobago- [Trinidad and Tobago]	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	Angustra Limited - [Trinidad and Tobago]	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	San Juan/ Laventille Regional Corporation- [Trinidad and Tobago]	In-kind	Recurrent expenditures	100,000.00
Recipient Country Government	Chaguanas Borough Corporation- [Trinidad and Tobago]	In-kind	Recurrent expenditures	100,000.00
Private Sector	Trinidad and Tobago Incoming Tour Operators' Association- [Trinidad and Tobago]	In-kind	Recurrent expenditures	50,000.00
Private Sector	Nanan's Eco Tour Operators- [Trinidad and Tobago]	In-kind	Recurrent expenditures	50,000.00
Civil Society Organization	Council of Presidents for the Environment (COPE)- [Trinidad and Tobago]	In-kind	Recurrent expenditures	50,000.00
Civil Society Organization	Network of Rural Women Producers- [Trinidad and Tobago]	In-kind	Recurrent expenditures	50,000.00

Civil Society Organization	Fishermen and Friends of the Sea (FFOS)- [Trinidad and Tobago]	In-kind	Recurrent expenditures	50,000.00
Recipient Country Government	Ministry of Environment and Sustainable Development - [Madagascar]	Grant	Investment mobilized	6,000,000.00
Recipient Country Government	Ministry of Fisheries and Marine Resources-[Madagascar]	Grant	Investment mobilized	2,080,000.00
Recipient Country Government	Ministry of Environment and Sustainable Development-[Madagascar]	In-kind	Recurrent expenditures	1,400,000.00
Recipient Country Government	Ministry of Fisheries and Marine Resources-[Madagascar]	In-kind	Recurrent expenditures	562,000.00
Recipient Country Government	Directorate General of Environment and Sustainable Development-[Madagascar]	Grant	Investment mobilized	105,000.00
Recipient Country Government	Directorate General of Environment and Sustainable Development-[Madagascar]	In-kind	Recurrent expenditures	1,895,000.00
Recipient Country Government	Tolagnaro Urban District-[Madagascar]	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Toliaro Urban District-[Madagascar]	In-kind	Recurrent expenditures	500,000.00
Private Sector	COPREFITO S.A. -[Madagascar]	Grant	Investment mobilized	2,400,000.00
Private Sector	Fondation pour les Aires Protégées et la Biodiversité de Madagascar-[Madagascar]	Grant	Investment mobilized	1,166,000.00
Private Sector	Port Ehoala S.A.-[Madagascar]	Grant	Investment mobilized	300,000.00
Others	Institut Halieutique et des Sciences Marines-[Madagascar]	Grant	Investment mobilized	800,000.00
Private Sector	COPREFITO S.A. -[Madagascar]	In-kind	Recurrent expenditures	492,000.00

Private Sector	Fondation pour les Aires Protégées et la Biodiversité de Madagascar-[Madagascar]	In-kind	Recurrent expenditures	400,000.00
Others	Institut Halieutique et des Sciences Marines-[Madagascar]	In-kind	Recurrent expenditures	200,000.00
Civil Society Organization	Blue Venture-[Madagascar]	Grant	Investment mobilized	150,000.00
Civil Society Organization	Blue Venture-[Madagascar]	In-kind	Recurrent expenditures	200,000.00
Donor Agency	WB-[Madagascar]	Loans	Investment mobilized	8,000,000.00
Donor Agency	AfDB-[Madagascar]	Loans	Investment mobilized	5,000,000.00
GEF Agency	UNDP -[Madagascar]	Grant	Investment mobilized	500,000.00
Total Co-financing				**748,061,993.00**

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	phone	Email
GEF Agency Coordinator	Jeffrey Griffin	10/16/2023	Lorenzo Paolo Galbiati	+393333981370	lorenzo.galbiati@fao.org

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

Name	Position	Ministry	Date (MM/DD/YYYY)
Miruza Mohamed	GEF Operational Focal Point - Director, Environment Management and Conservation Department	Ministry of Environment, Climate Change and Technology-Republic of Maldives	10/5/2023
Israel Alejandro Camacho Bahena	GEF Operational Focal Point - Director of Sustainable Finance	Ministry of Finance and Pubic Credit of Mexico	10/11/2023
Petru Tataru	GEF Operational Focal Point - Secretary General of the Ministry of Environment	Ministry of Environment-Republic of Moldova	10/9/2023
Raul Pinedo	GEF Operational Focal Point	Ministry of Environment of Panama	11/14/2023

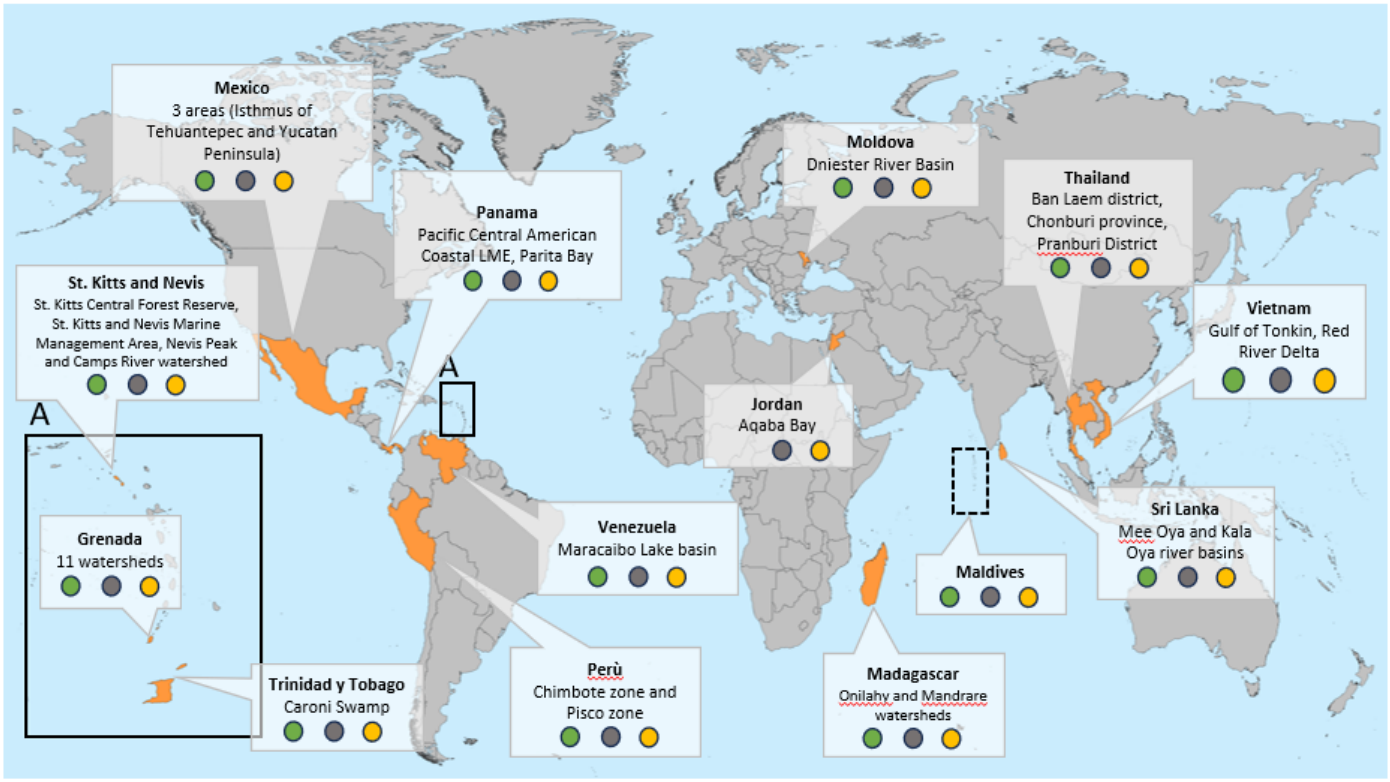
Inés Pando Ávila	GEF Operational Focal Point	Ministry of Environment-Peru	10/6/2023
Dr. Anil Jasinghe	GEF Operational Focal Point - Secretary, Ministry of Environment Sri Lanka	Ministry of Environment-Sri Lanka	10/11/2023
Hayden Romano	GEF Operational Focal Point - Managing Director	Environmental Management Authority - Trinidad and Tobago	9/19/2023
Jatuporn Buruspat	GEF Operational Focal Point - Permanent Secretary	Ministry of Natural Resources and Environment-Thailand	10/16/2023
Miguel Alberto Serrano Orta	GEF Operational Focal Point - Director of Integration and International Affairs	Ministerio del Poder Popular para el Ecosociaismo - Venezuela	10/11/2023
Ms. Nicole Clarke	GEF Operational Focal Point - Permanent Secretary (AG.)	Ministry of Mobilization, Implementation and Transformation - Grenada	11/12/2023
Nerissa Williams	GEF Operational Focal Point - Permanent Secretary	Ministry of Environment, Climate Action, and Constituency Empowerment - St Kits and Nevis	10/16/2023
Dr Hery A. Rakotondravony	GEF Operational Focal Point	Ministry of Environment and Sustainable Development - Madagascar	10/12/2023
Nguyen Duc Thuan	GEF Operational Focal Point - Director, Vietnam Environment Protection Fund	Ministry of Natural Resources and Environment - VietNam	10/18/2023
Marwan Alrefai	Secretary General - GEF OFP	Ministry of Water and Irrigation - Jordan	10/26/2023

ANNEX C: PROGRAM LOCATION

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

Clean and Healthy Ocean Integrated Program (CHO-IP) Child Projects*

Addressing marine hypoxic zones by curbing coastal pollution from agriculture, industrial and municipal sources through policy and regulatory measures and infrastructure investments combined with nature-based solutions. In doing so, the program will foster the enabling environment to advance country efforts toward sustainable blue economy goals.



* 14 National Child Projects + 1 Global Coordination Project

Land-based sources of coastal pollution:

- Agriculture
- Industry/Tourism
- Urban

COORDINATES OF CHO IP CHILD PROJECTS LOCATIONS

ST. KITTS AND NEVIS

St. Kitts Central Forest Reserve: 17.33173, -62.78978

Nevis Peak: 17.15245, -62.58810

St. Kitts and Nevis Marine Management Area (Note this management area is the entire circumference of the islands and the specific areas have not been identified. Thus the coordinates provided here will be adjusted during the PPG.): 17.20637, -62.57442; 17.16003, -62.62955; 17.23314, -62.63489; 17.29060, -62.68118; 17.29502, -62.72321

GRENADA

Grenville Bay: 12.12236, -61.62079

Grand Bay: 11.99739, -61.796555

Grand Anse Bay : 12.02754, -61.76984

Windward: 12.51362, -61.43022

Lauristan: 12.47868, -61.47359

St. John: 12.15334, -61.73711

Beausejour Bay: 12.09984, -61.76080

Halifax Harbour: 12.11052, -61.74861

Richmond Hill: 12.05203, -61.73823

Chemin: 12.02609, -61.75888

Grand Anse Marine Protected Area: 12.03349, -61.76504

Molinere-Beausejour Marine Protected Area: 12.08443, -61.76330

Woburn-Clark-Court Bay Marine Protected Area: 12.01074, -61.73785

Sandy Island-Oyster Bay Protected Area: 12.2220

SRI LANKA

1. Top-Left Corner: (79.761907, 8.462288)

2. Top-Right Corner: (80.783873, 8.462288)

3. Bottom-Right Corner: (80.783873, 7.698884)

4. Bottom-Left Corner: (79.761907, 7.698884)

MOLDOVA

The Dniester River Basin

Northern direction (Top) border 49°04’03.11” N 28°34'56.84' E elevation (average) 390 ft

Southern direction (bottom) 46°19'00.82' N 30°01'35.50 E elevation (average) 59 ft (lowland wetlands)

Western direction 47°12'21.47' N 28°44'23.74' E elevation (average) 767 ft (bordering the central hilly area)

Eastern direction 47°07'09.38' N 29°19'34.66' E elevation 156 ft

MALDIVES

Thoddoo: 4.4361, 72.96055

Gan, Laamu Atoll: 1.92322, 73.54468

Villingili (Viligili, Vilimalé): 4.17336, 73.48502

PERU

VERTICE	Name	Longitude	Latitude
1	El Ferrol Bay	-78,607631	-9,168748

2	El Ferrol Bay	-78,631257	-9,144397
3	El Ferrol Bay	-78,640106	-9,104405
4	El Ferrol Bay	-78,624092	-9,079443
5	El Ferrol Bay	-78,592059	-9,037502
6	El Ferrol Bay	-78,572251	-9,042922
7	El Ferrol Bay	-78,48109	-9,131024
8	El Ferrol Bay	-78,57323	-9,171471

Vertice	Name	Longitude	Latitude
1	Pisco Wetlands	-76,373384	-13,875267
2	Pisco Wetlands	-76,377721	-13,59026
3	Pisco Wetlands	-76,186874	-13,544945
4	Pisco Wetlands	-76,034534	-13,574666
5	Pisco Wetlands	-75,855704	-13,757069
6	Pisco Wetlands	-76,043963	-13,876066

TRINIDAD Y TOBAGO

Caroni Swamp, Beetham Highway, Laventille, San Juan-Laventille, 120110, Trinidad and Tobago:

10.63954, -61.48236

VIETNAM

OBJECTID	Province	District	X	Y
619	Thái Bình	Thái Thụy	106.602650	20.483446
620	Thái Bình	Tiền Hải	106.538837	20.357866
442	Nam Định	Hải Hậu	106.271839	20.125742
446	Nam Định	Nghĩa Hưng	106.148616	20.099386
228	Hải Phòng	Cát Hải	107.162518	20.612281

THAILAND

Ban Laem district: 13.16968, -99.98771

Pattaya City 12.93333, -100.88333

Bang Saen 13.28169, -100.91578

Pranburi District: 13.16968, -99.98771

MADAGASCAR

Atsimo Andrefana: Onilahy watershed:

Onilahy Watershed

Latitude Longitude

Corners 23°20'26.87'S 44°39'48.94'E / 23°45'56.47'S44°44'22.97'E / 23°40'56.62'S43°45'21.83'E / 23°11'25.24'S 43°35'48.45'E

Centre 23°29'50.98'S 44° 9'54.73'E

Anôsy: Mandrare watershed (Port d'Ehola):

Mandrare watershed

Latitude Longitude

Corners 25° 5'52.16'S 47° 9'36.70'E / 24° 8'46.87'S 47°30'29.82'E / 24° 1'19.74'S 46°54'16.57'E / 25°14'34.04'S 46°15'11.65'E

Centre 24°34'57.43'S 46°49'56.47'E

JORDAN

Aqaba Bay: 29.520587, 34.985587 (project will target 10% of the entire area of the Bay)

MEXICO

PACA LME 16.362896°N 94.189703°W

Gulf of Mexico LME 18.152158°N 94.645834°W

Caribe LME 18.175275°N 88.975698°W

PANAMA

Parita Bay, the Arco Seco: 8.192294, -80.423132

VENEZUELA

Location	Latitude	Longitude
Maracaibo Lake	9.804704	-71.517596
Catacumbo Municipality	9.061652	-72.235881

Jesus Maria Semprum Municipality	8.740567	-72.514684
Rangel Municipality	9.378493	-70.732828
Tovar Municipality	8.330199	-71.752881
Alberto Adriani Municipality	8.616429	-71.643694
Colon Municipality	8.997239	-71.921749
Francisco Javier Pulgar Municipality	8.959955	-71.606362
Maracaibo Municipality	10.640885	-71.607517

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

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

Title

Full ES Risk Screening checklist for CHO IP

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Decertification
Significant Objective 1	Significant Objective 1	Significant Objective 1	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		
	Demonstrate innovative approaches		
	Deploy innovative financial instruments		
Stakeholders			
	Indigenous Peoples		
	Private Sector		
		Capital providers	
		Financial intermediaries and market facilitators	

		Large corporations	
		SMEs	
		Individuals/Entrepreneurs	
		Non-Grant Pilot	
		Project Reflow	
	Beneficiaries		
	Local Communities		
	Civil Society		
		Community Based Organization	
		Non-Governmental Organization	
		Academia	
		Trade Unions and Workers Unions	
	Type of Engagement		
		Information Dissemination	
		Partnership	
		Consultation	
		Participation	
	Communications		
		Awareness Raising	
		Education	
		Public Campaigns	
		Behavior Change	
Capacity, Knowledge and Research			
	Enabling Activities		
	Capacity Development		
	Knowledge Generation and Exchange		
	Targeted Research		
	Learning		
		Theory of Change	
		Adaptive Management	
		Indicators to Measure Change	
	Innovation		
	Knowledge and Learning		
		Knowledge Management	
		Innovation	
		Capacity Development	
		Learning	
	Stakeholder Engagement Plan		
Gender Equality			
	Gender Mainstreaming		
		Beneficiaries	
		Women groups	
		Sex-disaggregated indicators	
		Gender-sensitive indicators	
	Gender results areas		
		Access and control over natural resources	
		Participation and leadership	
		Access to benefits and services	
		Capacity development	
		Awareness raising	
		Knowledge generation	
Focal Areas/Theme			
	Integrated Programs		
		Commodity Supply Chains ([1][2]Good Growth Partnership)	
			Sustainable Commodities Production
			Deforestation-free Sourcing
			Financial Screening Tools
			High Conservation Value Forests
			High Carbon Stocks Forests
			Soybean Supply Chain
			Oil Palm Supply Chain

			Beef Supply Chain
			Smallholder Farmers
			Adaptive Management
		Food Security in Sub-Sahara Africa	
			Resilience (climate and shocks)
			Sustainable Production Systems
			Agroecosystems
			Land and Soil Health
			Diversified Farming
			Integrated Land and Water Management
			Smallholder Farming
			Small and Medium Enterprises
			Crop Genetic Diversity
			Food Value Chains
			Gender Dimensions
			Multi-stakeholder Platforms
		Food Systems, Land Use and Restoration	
			Sustainable Food Systems
			Landscape Restoration
			Sustainable Commodity Production
			Comprehensive Land Use Planning
			Integrated Landscapes
			Food Value Chains
			Deforestation-free Sourcing
			Smallholder Farmers
		Sustainable Cities	
			Integrated urban planning
			Urban sustainability framework
			Transport and Mobility
			Buildings
			Municipal waste management
			Green space
			Urban Biodiversity
			Urban Food Systems
			Energy efficiency
			Municipal Financing
			Global Platform for Sustainable Cities
			Urban Resilience
	Biodiversity		
		Protected Areas and Landscapes	
			Terrestrial Protected Areas
			Coastal and Marine Protected Areas
			Productive Landscapes
			Productive Seascapes
			Community Based Natural Resource Management
		Mainstreaming	
			Extractive Industries (oil, gas, mining)
			Forestry (Including HCVF and REDD+)
			Tourism
			Agriculture & agrobiodiversity
			Fisheries
			Infrastructure
			Certification (National Standards)
			Certification (International Standards)
		Species	
			Illegal Wildlife Trade
			Threatened Species
			Wildlife for Sustainable Development
			Crop Wild Relatives
			Plant Genetic Resources
			Animal Genetic Resources
			Livestock Wild Relatives

			Invasive Alien Species (IAS)
		Biomes	
			Mangroves
			Coral Reefs
			Sea Grasses
			Wetlands
			Rivers
			Lakes
			Tropical Rain Forests
			Tropical Dry Forests
			Temperate Forests
			Grasslands
			Paramo
			Desert
		Financial and Accounting	
			Payment for Ecosystem Services
			Natural Capital Assessment and Accounting
			Conservation Trust Funds
			Conservation Finance
		Supplementary Protocol to the CBD	
			Biosafety
			Access to Genetic Resources Benefit Sharing
	Forests		
		Forest and Landscape Restoration	
			REDD/REDD+
		Forest	
			Amazon
			Congo
			Drylands
	Land Degradation		
		Sustainable Land Management	
			Restoration and Rehabilitation of Degraded Lands
			Ecosystem Approach
			Integrated and Cross-sectoral approach
			Community-Based NRM
			Sustainable Livelihoods
			Income Generating Activities
			Sustainable Agriculture
			Sustainable Pasture Management
			Sustainable Forest/Woodland Management
			Improved Soil and Water Management Techniques
			Sustainable Fire Management
			Drought Mitigation/Early Warning
		Land Degradation Neutrality	
			Land Productivity
			Land Cover and Land cover change
			Carbon stocks above or below ground
		Food Security	
	International Waters		
		Ship	
		Coastal	
		Freshwater	
			Aquifer
			River Basin
			Lake Basin
		Learning	
		Fisheries	
		Persistent toxic substances	
		SIDS : Small Island Dev States	
		Targeted Research	
		Pollution	
			Persistent toxic substances

			Plastics
			Nutrient pollution from all sectors except wastewater
			Nutrient pollution from Wastewater
		Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		Strategic Action Plan Implementation	
		Areas Beyond National Jurisdiction	
		Large Marine Ecosystems	
		Private Sector	
		Aquaculture	
		Marine Protected Area	
		Biomes	
			Mangrove
			Coral Reefs
			Seagrasses
			Polar Ecosystems
			Constructed Wetlands
	Chemicals and Waste		
		Mercury	
		Artisanal and Scale Gold Mining	
		Coal Fired Power Plants	
		Coal Fired Industrial Boilers	
		Cement	
		Non-Ferrous Metals Production	
		Ozone	
		Persistent Organic Pollutants	
		Unintentional Persistent Organic Pollutants	
		Sound Management of chemicals and Waste	
		Waste Management	
			Hazardous Waste Management
			Industrial Waste
			e-Waste
		Emissions	
		Disposal	
		New Persistent Organic Pollutants	
		Polychlorinated Biphenyls	
		Plastics	
		Eco-Efficiency	
		Pesticides	
		DDT - Vector Management	
		DDT - Other	
		Industrial Emissions	
		Open Burning	
		Best Available Technology / Best Environmental Practices	
		Green Chemistry	
	Climate Change		
		Climate Change Adaptation	
			Climate Finance
			Least Developed Countries
			Small Island Developing States
			Disaster Risk Management
			Sea-level rise
			Climate Resilience
			Climate information
			Ecosystem-based Adaptation
			Adaptation Tech Transfer
			National Adaptation Programme of Action
			National Adaptation Plan
			Mainstreaming Adaptation
			Private Sector
			Innovation
			Complementarity
			Community-based Adaptation
			Livelihoods
		Climate Change Mitigation	

			Agriculture, Forestry, and other Land Use
			Energy Efficiency
			Sustainable Urban Systems and Transport
			Technology Transfer
			Renewable Energy
			Financing
			Enabling Activities
		Technology Transfer	
			Poznan Strategic Programme on Technology Transfer
			Climate Technology Centre & Network (CTCN)
			Endogenous technology
			Technology Needs Assessment
			Adaptation Tech Transfer
		United Nations Framework on Climate Change	
			Nationally Determined Contribution
		Climate Finance (Rio Markers)	Paris Agreement Sustainable Development Goals Climate Change Mitigation 1 Climate Change Mitigation 2 Climate Change Adaptation 1 Climate Change Adaptation 2

ANNEX H : CHILD PROJECT INFORMATION

Title

Updated AnnexH CHO IP-Set of CPs_Nov23

Updated AnnexH CHO IP-Set of CPs

Consolidated CPs Concept Notes-16Oct23

Child Projects under the Program

Country	Project Title	GEF Agency	GEF Amount ($) PROJECT FINANCING	Agency Fees($)	Total($)
	FSPs				
Viet Nam	Enhancing water management and compliance to address hypoxia caused by nutrients, and other pollutants, into the Gulf of Tonkin (Vietnam)	FAO	3,825,535.00	344,297.00	4,169,832.00
Venezuela	Conservation and sustainable development of the Maracaibo Lake basin as a contribution to the improvement of the large marine ecosystem of the Caribbean (Venezuela)	FAO	15,143,432.00	1,362,902.00	16,506,334.00

Sri Lanka	Addressing marine hypoxia in the Bay of Bengal Large Marine Ecosystem by reducing land-based agricultural pollution in the north-west of Sri Lanka	FAO	2,652,294.00	238,706.00	2,891,000.00
Global	Global Coordination Project-Clean and Healthy Ocean Integrated Program	FAO	12,452,292.00	1,120,706.00	13,572,998.00
Jordan	Addressing marine hypoxia in the Gulf of Aqaba by reducing land-based sources of pollution in Jordan	EBRD	2,652,294.00	238,706.00	2,891,000.00
St. Kitts and Nevis	Building a Blue-Green Economy in St. Kitts and Nevis	CI	2,652,294.00	238,706.00	2,891,000.00
Panama	Reducing coastal pollution in the Parita Bay in Panama	IADB	2,927,523.00	263,477.00	3,191,000.00
Maldives	Sustainable Nitrogen Management for a Clean & Healthy Ocean: Maldives as a SIDS regional catalyst	UNEP	3,978,440.00	358,060.00	4,336,500.00
Grenada	Improving Waste Management and Public Awareness for a Clean and Healthy Ocean (Grenada)	CI	5,048,777.00	454,389.00	5,503,166.00
Thailand	Seeding a Nutrient Pollution Reduction Strategy for the coastal waters of Thailand	UNEP	3,061,009.00	275,491.00	3,336,500.00

Mexico	Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions	UNDP	13,461,469.00	1,211,531.00	14,673,000.00
Moldova	BBSEA Moldova WATERWISE (Wetlands and Terrestrial Ecosystem Restoration for Watershed Improvements and Sustainable Environments)	World Bank	7,903,975.00	711,356.00	8,615,331.00
Peru	Nature based solutions to reduce coastal pollution in Peru	UNDP	9,891,743.00	890,257.00	10,782,000.00
Trinidad and Tobago	Rehabilitation of the Beetham Wastewater Stabilization Ponds (WSP) (Trinidad and Tobago)	UNEP	3,061,009.00	275,491.00	3,336,500.00
Madagascar	Green, blue and healthy investments to reduce land-based pollution affecting marine ecosystems in Madagascar	UNDP	11,626,605.00	1,046,394.00	12,672,999.00
	Subtotal ($)		100,338,691.00	9,030,469.00	109,369,160.00
	MSPs				
	Subtotal ($)		0.00	0.00	0.00
	Grant Total ($)		100,338,691.00	9,030,469.00	109,369,160.00