GFCR FULL PROGRAMME DOCUMENT

I. Full Programme Summary Information

Programme Title: *Sri Lanka Coral Reef Initiative*	**Recipient Organisation(s):** *IUCN Sri Lanka (Convening Agent)*
Convening Agent: *IUCN Sri Lanka* **Programme Focal Point Contact**: *Shamen P. Vidanage, PhD* *Country Representative, IUCN Sri Lanka* *shamen.vidanage@iucn.org* *(+94) 77 775 3743* *Naalin Perera* *Senior Programme Officer, IUCN Sri Lanka* *naalin.perera@iucn.org* *(+94) 77 374 1243*	**Programme Location** Country: *Sri Lanka* Priority Coral Reef Site(s): 1. *Bar Reef Sanctuary and Seascape* 2. *Kayankerni Sanctuary and Seascape* 3. *Pigeon Island Marine National Park and Seascape*
18-month Programme Cost (USD)[1]: Convening Agent: USD 1,524,484	**Proposed Start Date[2]:** *March, 2024* **Proposed End Date:** *December, 2030*
Programme Description: *Sri Lanka Coral Reef Initiative (SLCRI) is designed to protect three priority seascapes of Sri Lanka associated with climate 'refugia' coral reefs through multi-sector and multi-stakeholder participation and private sector friendly investments. SLCRI interventions are aligned with all four GFCR outcome areas and expect to generate a transformational shift in the way coral friendly approaches are adopted and upscaled in Sri Lanka. The SLCRI programme includes activities for enabling effective management of resilient coral reef seascapes through the establishment of co-management mechanisms, and seascape-specific coral reef conservation trust funds that both benefit from - and support the development of - reef-positive business models in coordination with a Coral Positive Business Support Facility. In addition, the programme intends to explore and establish financial mechanisms such as biodiversity credits, improve community resilience through disaster risk reduction mechanisms, and acquire private sector contributions to coral reef restoration initiatives. Supported ecosystem friendly, coral-positive businesses and better managed seascapes will uplift coral-dependent communities and coral related economic sectors ensuring the coral reef ecosystems are protected and restored, sustaining their extractive and non-extractive uses, ensuring the resilience of both coral reefs and communities.*	

[1] As per GFCR Executive Board decision, disbursements will be determined based on fiduciary assessment, expenditures and GFCR Secretariat's performance review.

[2] Programme start date will be triggered by the initial fund transfer of the GFCR Trustee

Signature of Convening Agent:

Organisation: IUCN Sri Lanka
Name: Shamen P. Vidanage, PhD
Title: Country Representative

Signature _[redacted]_ Date 11 December 2023

Signature of GFCR Executive Board UN Partner:

Print:
Organisation United Nations Environment Programme (UNEP)
Name Leticia Carvalho
Title Head of Marine and Freshwater Branch

Signature __[redacted]_ Date 11 December 2023

II. Budget Request Summary by UNDG Categories

UNDG Categories	TOTAL
1. Staff and other personnel	$267,061
2. Supplies, Commodities, Materials	$63,600
3. Equipment, Vehicles, and Furniture (including Depreciation)	$58,500
4. Contractual services	$355,900
5. Travel	$162,990
6. Transfers and Grants to Counterparts	$452,900
7. General Operating and other Direct Costs	$63,800
Total Direct Costs	**$1,424,751**
8. Indirect Support Costs (7%)	$99,733
TOTAL Budget	**$1,524,484**

III. Acronyms and Definitions

Acronym	Definition
ADB	Asian Development Bank
ALDFGs	Abandoned, Lost or otherwise Discarded Fishing Gear
BIOFIN	Biodiversity Financing Initiative
BOBLME	Bay of Bengal Large Marine Ecosystem
BRS	Bar Reef Sanctuary
BRT	Blue Resource Trust
BSF	Business Support Facility
BSL	Biodiversity Sri Lanka
CBO	Community Based Organization
CC&CRMA	Coast Conservation and Coastal Resources Management Act
CC&CRMD	Coast Conservation and Coastal Resource Management Department
CCG	Community Conservation Group
CCTF	CORALL Conservation Trust Fund
CEA	Central Environmental Authority
CFA	Conservation Finance Alliance
CMC	Co-Management Committee
COLIBRI	Corporate Linked Bonds with Return Improvement
CORALL	Conservation of Reefs for All Lives and Livelihoods
CPBSF	Coral Positive Business Support Facility
CRMP	Coastal Resource Management Plan
CSF	Centre for Smart Future
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSR	Corporate Social Responsibility
CTF	Conservation Trust Fund
CZ&CRMP	Coastal Zone and Coastal Resource Management Plan
CZMP	Coastal Zone Management Plan
DFAR	Department of Fisheries and Aquatic Resources
DRR	Disaster Risk Reduction
DSD	Divisional Secretariat Division
DWC	Department of Wildlife Conservation
EFL	Environmental Foundation (Guarantee) Limited
EIA	Environmental Impact Assessment
EPL	Environment Protection License
ESA	Environmentally Sensitive Areas
EU	European Union
FAO	Food and Agriculture Organization
FARA	Fisheries and Aquatic Resources Act
FCCISL	Federation of Chambers of Commerce and Industry of Sri Lanka
FD	Forest Department
FEMA	Forum for Ecosystem Management and Advocacy
FFPA	Fauna and Flora Protection Act
FMA	Fisheries Management Area
GCRMN	Global Coral Reef Monitoring Network

GEF	Global Environment Facility
GFCR	Global Fund for Coral Reefs
GGGI	Global Green Growth Initiative
GIC-AIT	Geo Informatic Centre of Asian Institute of Technology
GND	Grama Niladhari Division
GOM	Gulf of Mannar
HMNP	Hikkaduwa Marine National Park
HSBC	Hongkong and Shanghai Banking Corporation Limited
IEE	Initial Environmental Examination
IIED	International Institute for Environment and Development
INSEE	Siam City Cement Lanka (Ltd.)
InVEST	Integrated Valuation of Ecosystem Services and Trade-Off
IT	Information Technology
IUCN	International Union for Conservation of Nature
km	Kilometre
KS	Kayankerni Sanctuary
LEF	Lanka Environment Fund
LMMA	Locally Managed Marine Areas
MARESSOL	Mannar Region Systemic Solution for Marine Litter
MEPA	Marine Environment Protection Authority
METT	Management Effectiveness Tracking Tool
MFARD	Ministry of Fisheries and Aquatic Resources Development
MoMD&E	Ministry of Mahaweli Development and Environment
MoE	Ministry of Environment
MoF	Ministry of Fisheries
MoW&FRC	Ministry of Wildlife and Forest Resource Conservation
MPA	Marine Protected Area
MSP	Marine Spatial Planning
NAC	National Advisory Committee
NAFSO	National Fisheries Solidarity Movement
NAQDA	National Aquaculture Development Authority
NARA	National Aquatic Resources Research and Development Agency
NbS	Nature-based Solutions
NEA	National Environment Act
NGOs	Non-Governmental Organizations
NSC	National Steering Committee
OCPP	Ocean Country Partnership Programme
ORCA	Ocean Resources Conservation Association
PILF	Public Interest Law Foundation
PIMNP	Pigeon Island Marine National Park

PPPP	Public-Private-People Partnership
RCM	Regional Cooperation Mechanism
Sarvodaya	Sarvodaya Shramadana Movement
SLCG	Sri Lanka Coast Guard
SLCRI	Sri Lanka Coral Reef Initiative
SLINTEC	Sri Lanka Institute of Nanotechnology
SLTDA	Sri Lanka Tourism Development Authority
SMA	Special Management Areas
SME	Small and Medium Enterprise
ToR	Terms of Reference
UDA	Urban Development Authority
UK	United Kingdom
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
VNR	Vidattaltivu Nature Reserve
WCMC	World Conservation Monitoring Centre
WNPS	Wildlife and Nature Protection Society
WRCT	Wildlife Research and Conservation Trust

IV. Executive Summary

Sri Lanka being a tropical continental island, is endowed with 680 km^2 of coral reefs, which have degraded over the past decades due to a multitude of anthropogenic and natural pressures, making 45% of the island's reefs deemed to be in a threatened state. However, some reefs have shown a remarkable recovery from recent natural coral bleaching events. Such climate 'refugia' coral reefs are of immense conservation value due to the pivotal ecosystem services provided by them to sustain coastal and marine fishery production among other provisions. Sri Lanka Coral Reef Initiative (SLCRI) is designed to protect three priority seascapes of Sri Lanka associated with climate 'refugia' coral reefs through multi-sector and multi-stakeholder participation and private sector friendly investments within Special Management Areas (SMAs).

Bar Reef and Kayankerni Sanctuaries and the Pigeon Island Marine National park and their associated environs were selected for the SLCRI following a scientific scoping among six of such climate 'refugia' coral reefs, considering their resilience to climate change, and global biodiversity value with local benefits for livelihoods and the economy. The programme is designed to improve conservation and sustainable management of larger seascapes encompassing those marine protected areas and adopting a seascape approach.

While these globally important coral reef sites are threatened by local threats primarily overfishing and the use of destructive methods such as blast fishing, abandoned fishing gear & ghost fishing, unsustainable tourism, pollution, nutrient loads, and sedimentation, minimising these threats through conservation action and law enforcement has not been successful due to sectoral management and lack of finances. To address the threats, barriers, and financial gap to effectively managing coral reef areas and mitigating local threats the SLCRI strategy encompasses the following key interconnected components under each outcome.

Outcome 1: Strengthened Protection for coral associated priority seascapes in Sri Lanka

(i) Establishing Co-Management Committees (CMCs) and youth and gender-inclusive Community Conservation Groups (CCGs) for each of the three seascapes to support law enforcement authorities in stopping destructive and illegal fishing, while sustainably managing marine resources, through effective implementation of Seascape Co-Management Plans.

(ii) Establishing CORALL (Conservation of Reefs for All Life and Livelihoods) Conservation Trust Funds (CCTFs) at three priority seascapes. CCTFs in each seascape will be managed by an NGO in close coordination with the relevant seascape CMCs and function as revolving funds. The CCTFs are part of the blended finance approach by having income from enterprises that generate revenue in the seascape. The CCTFs are envisioned to be financed by other donor funded projects and enterprises that generate a net positive revenue in the seascapes. This will sustain the financing of effective MPA management and law enforcement, ultimately contributing to the successful co-management of the entire seascape.

(iii) Adoption and piloting of at least one innovative financing mechanism (e.g., biodiversity credits).

Outcome 2: Transformed livelihoods of coral reef-dependent communities through coral–positive entrepreneurships with enhanced recovery from shocks in coral associated priority seascapes in Sri Lanka.

(i) Establishment of a Coral Positive Business Support Facility (CPBSF) to provide necessary support on different livelihood opportunities and business development for coral-dependent communities in the three priority seascapes. It will cover ecotourism, sustainable mariculture/aquaculture, waste management, and clean energy applications, through

technical assistance in creating value, introducing best practices, and reforming supply chains, while de-risking private sector finances and provide incentives for private sector engagement.

(ii) Disaster risk finance mechanisms such as alternative temporary employments, and 'Blue' stimulus packages to help recovery after shocks will be planned, through a study on the vulnerabilities reef-dependent communities face when businesses are affected by major shocks. The activity is to be initiated with GFCR funding in each seascape, and to be continued through government budget and sustainable financing mechanisms thereafter.

Outcome 3: Improved research and development capabilities in coral reef restoration in Sri Lanka

(i) Design and implementation of a practical restoration plan, based on robust business models for coral reef restoration and maintenance appropriate for each priority seascape with inputs from the CPBSF. This will be supported by Biodiversity Sri Lanka to convene a group of interested corporate partners and supported by the Blue Resource Trust (BRT) and Centre for Smart Future (CSF).

Furthermore, best practices for coral-positive eco-tourism related businesses in Maldives will be adopted in priority seascapes through a Regional Cooperation Mechanism to be established by the SLCRI. This includes sharing lessons learned with the GFCR Maldives programme facilitated by the GFCR Global Team.

The SLCRI intends to incubate a pipeline of 12 sustainable and bankable ecosystem-friendly and coral-positive businesses and enhance the resilience of a population of about 150,000 living in the priority seascapes, also having an overall influence on 230,900 hectares of marine area with 32,090 hectares of coral reefs. The actual number of direct and indirect beneficiaries including women will be much higher, including the stakeholders involved in the use and in the value chains.

The SLCRI will be implemented by IUCN Sri Lanka as the Convening Agent with the joint oversight of the Ministry of Environment (MoE) and the Ministry of Wildlife and Forest Resource Conservation (MoW&FRC), who will also co-chairing the National Steering Committee (NSC). The NSC will comprise key implementing partners of the programme including the Department of Wildlife Conservation (DWC), Coast Conservation and Coastal Resource Management Department (CC&CRMD), Department of Fisheries and Aquatic Resources (DFAR), Blue Resources Trust (BRT), Environmental Foundation (Guarantee) Limited (EFL), Sarvodaya Shramadana Movement (Sarvodaya), Biodiversity Sri Lanka (BSL), Community Based Organisations at seascape level, experts, and other stakeholders.

With a programme lifetime of six years starting from 2024, SLCRI interventions are aligned with all four GFCR outcome areas and expect to generate a transformational shift in the way coral friendly approaches are adopted and upscaled in Sri Lanka. It is also aligned with the GFCR's blended finance approach to unlock additional financing and catalyzing sustainable revenue streams for reef-positive practices, and intends to collaborate with the GFCR Investment Fund manager - Pegasus Capital Advisors (PCA). SLCRI Programme's leverage target ratio of GFCR grant to investment capital is 1:4, and it is expected to rely heavily on the grant funding especially during its phase I, while sustainable revenue streams through blended financing, will make the programme self-sustaining towards the Phase III. The SLCRI expects USD 6 Million as the total grant funding, with USD 1.5 Million for the phase I, while USD 24 Million is expected to be generated as investment for the full project which includes co-financing of USD 9 Million. The co-management committees are expected to be well established with sustained finances through the operation of the CCTF and continued technical assistance from self-sustained CPBSF as well as the seascape-specific Forum for Ecosystem Management and Advocacy (FEMA) sub committees by the time the programme comes to its end in 2030. A smooth exit is hence intended ensuring financial sustainability in the three priority seascapes. This investment from GFCR will develop best practices at three priority

seascapes to be taken up in other coral reef sites, such as the other three areas studied for the SLCRI, where preliminary work such as stakeholder consultations and bio-physical and socio-economic baselines are in place. Hence, the possibility of replication and upscaling of the programme's financing solutions to other climate 'refugia' coral reefs for reef resilience building is envisaged.

V. Full Programme Narrative

Contents

1 Coral Reef Situation Analysis

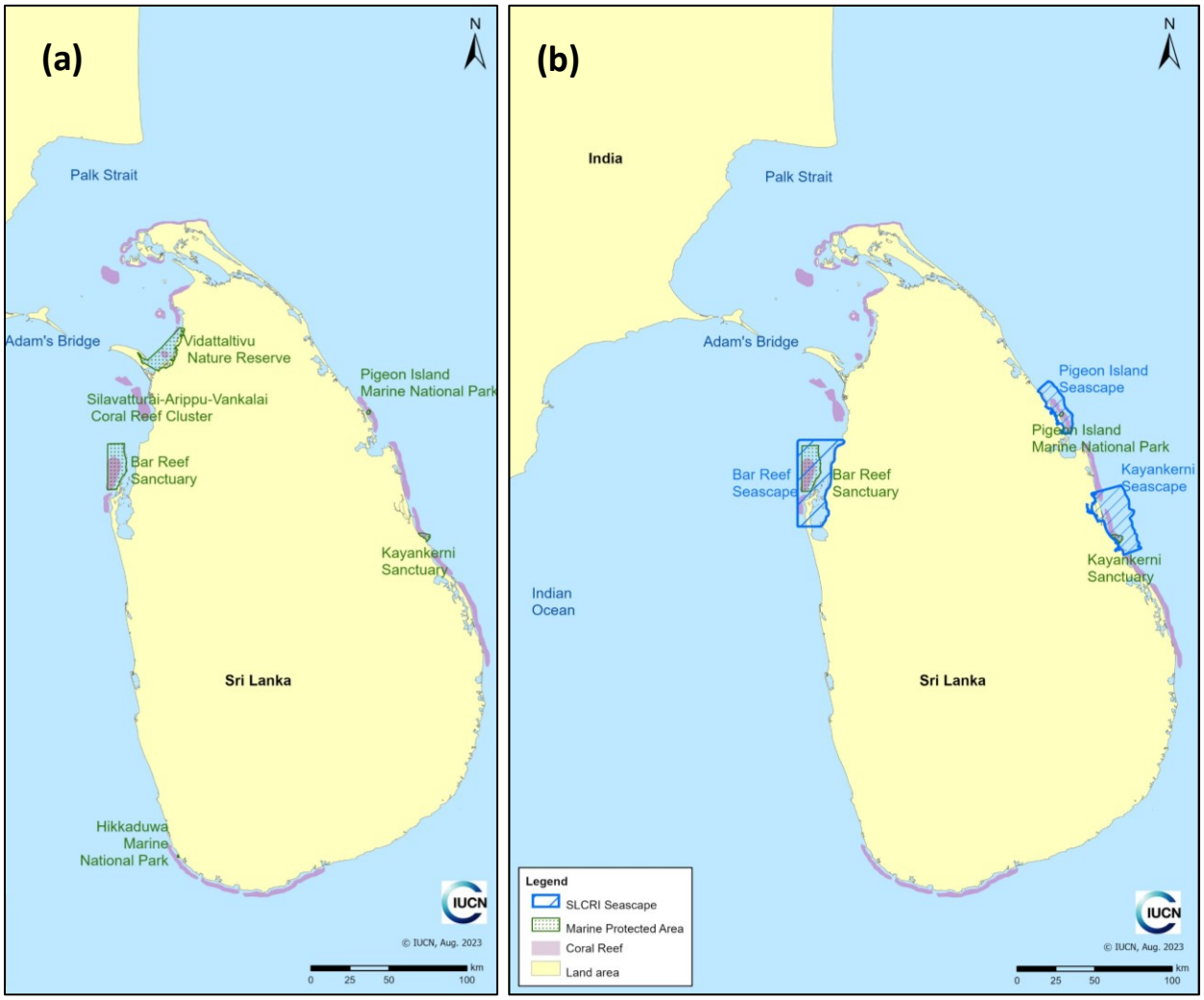

Figure 1. (a) Five Marine Protected Areas (MPAs) and the Silavatturai-Arippu-Vankalai coral reef cluster identified for scoping under the Sri Lanka Coral Reef Initiative (SLCRI) programme preparation and the general distribution of coral reefs in Sri Lanka, and (b) Three priority coral associated seascapes (encompassing three of the above MPAs) selected for the SLCRI programme.

1.1 National context and global significance

Sri Lanka is located between 5°55′ and 9°51′ N and 79°41′ and 81°53′ E in the northern Indian Ocean. The island has the 3rd highest area of coral reefs (680 km^2) in South Asia after Maldives and India [3]. Major reef formations in Sri Lanka include fringing reefs and offshore patch reefs. Reef habitat types include coral, sandstone, and rock reefs[4]. Fringing coral reefs are found along 2% of the coastline[5]. Sandstone and rock

3 Spalding M., Ravilious C. & Green E. (2001) Sri Lanka. In: World Atlas of Coral Reefs pp. 424. WCMC.
4 Rajasuriya A. & De Silva M. W. R. N. (1988) Stony Corals of the Fringing Reefs of the Western, Southwestern and Southern Coasts of Sri Lanka. In: Proc 6th International Coral Reef Symposium pp. 287-296, Australia.
5 Swan B. (1983) An introduction to the Coastal Geomorphology of Sri Lanka. National Museums of Sri Lanka, Colombo.

reef habitats have less live coral cover than coral reefs but are more widespread and occur both within inshore to offshore areas on the continental shelf, some exceeding a depth of 50 meters[6]. Most coral habitats are scattered in the shallow inshore areas as fringing reefs while the most extensive coral reef habitats in the country are found as offshore patch reefs in the Gulf of Mannar (Bar Reef Sanctuary and the Silavatturai-Arippu-Vankalai coral reef cluster; see Figure 1). Two hundred and forty-five species (245) of hard corals and over 500 species of reef fish have been recorded on all reef habitats, including over 30 species of butterflyfish indicating the wide variety of suitable habitats found within the broad reef frameworks[7, 8, 9]. Several species of crustaceans, sponges, soft corals, and gorgonians are also present. Globally threatened Hump-head Wrasses are also found on both inshore and offshore reef habitats. Megafauna associated with coral reefs include five species of spiny lobsters and three species of sea turtles (Hawksbill, Green and Olive Ridley).

Most coral reefs were relatively healthy in Sri Lanka, with some reefs in the Gulf of Mannar having almost 80 to 90 percent live coral cover prior to the 1998 coral bleaching event[10]. Since then, there were several minor and localized bleaching events until 2016, when another large-scale bleaching event occurred in the country. A fair number of reefs that showed appreciable recovery until 2016 were damaged and live coral cover has continued to decline in some areas[11]. However, the impact of the 2016 bleaching event is highly variable affecting only some coral reefs.

Larger seascapes encompassing Bar Reef Sanctuary (BRS), Pigeon Island Marine National Park (PIMNP) and Kayankerni Sanctuary (KS) were selected as priority seascapes associated with climate 'refugia' coral reef sites for this programme (see under seascape selection). The impact of repeated coral bleaching events on the three priority seascapes is highly variable. At present there is a considerable regeneration of corals observed at all three seascapes, where new coral recruitment and regeneration from coral tissue that was not destroyed during the bleaching have been observed.

In addition to coral bleaching events there are several human activities both extractive and non-extractive that cause coral reef degradation. The use of destructive fishing including the use of explosives is the main cause of physical damage to coral reefs. Pollution, coastal development, and sedimentation are also major threats. Some threats are site specific while others are widespread[12]. Water quality data collected during the programme preparation in 2022-2023 from priority seascapes show that parameters do not surpass the threshold values that could potentially harm the resilience of coral reefs.

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[6] Rajasuriya A. (2007) Coral Reefs. In: The National Atlas of Sri Lanka, 2nd Edition pp. 93 - 94. The Survey Department of Sri Lanka

[7] MOE (2012) The National Red List 2012 of Sri Lanka: Conservation Status of the Fauna and Flora. Ministry of Environment, Colombo, Sri Lanka.

[8] Weerakoon D., Goonatilake S. D. A., Wijewickrama T., Rajasuriya A., Perera N., T.P K., De Silva G., Miththapala S. & Mallawatantri A. (2020) Conservation and sustainable use of biodiversity in the islands and lagoons of northern Sri Lanka. IUCN Sri Lanka Country Office, Colombo Sri Lanka.

[9] Arulananthan A., Herath V., Kuganathan S., Upasanta A. & Harischandra A. (2021) The Status of the Coral Reefs of the Jaffna Peninsula (Northern Sri Lanka), with 36 Coral Species New to Sri Lanka Confirmed by DNA Bar-Coding. Oceans 2: 509-529.

[10] Wilkinson C. ed. (2000) Status of Coral Reefs of the World: 2000. Australian Institute of Marine Science, Townsville.

[11] GCRMN (2020) *Status of Coral Reefs of the World 2020*. Souter, D., Planes, S., Wicquart, J., Logan, M., Obura, D & Staub, F (eds.). Global Coral Reef Monitoring Network.

[12] Painter SC, Artioli Y, Amir FH, Arnull J, Ganeshram RS, Ibrahim N, Samuel VD, Robin RS, Raghuraman R, Purvaja R, Ramesh R, Rajasuriya A, Rendon OR, Shazly A, Wilson AMW & Tudhope A. (2023) Anthropogenic nitrogen pollution threats and challenges to the health of South Asian coral reefs. *frontiers in Marine Science,* 10:1187804.: 36.

Coral reefs in South Asia region play a significant role in national economies through fisheries and tourism especially in India, Maldives, and Sri Lanka[13]. Reef resources are utilized heavily for various commercial and recreational activities in Sri Lanka. Commercial fishing is the main economic activity centred around reefs. Marine fisheries, including reef fisheries support livelihoods of many coastal communities around the country, which constituted 76% of the fish production in 2021 (331,675 Mt; 41% from coastal fisheries, and 35% from offshore/deep-sea fish production)[14]. Additionally, Sri Lanka earned about USD 23 Mn in 2022 from Ornamental fish exportation. However, the contribution of marine fisheries to GDP is only about 1.13%. The Total Fishing Households in Sri Lanka is 185,390 occupied with 804,760 fisher population but only 28% are active fisher women and men in Sri Lanka.

Sri Lanka's coastal tourism is mainly centred around beach and reef diving related sectors concentrated mainly around the southern and eastern coastal areas of the country, 77.2% [15] of foreign visitors are engaged in marine tourism activities which include beach, surfing, snorkelling, scuba/shipwreck diving, marine mammal viewing and water sports such as wind and kite surfing. A total of 719,978 tourist arrivals were recorded in 2022, with earnings from tourism estimated at USD 1,136 Mn. Baseline studies have highlighted that there are adequate tourism development opportunities in the three selected seascapes of SLCRI. For example, tourism is considered a rather lucrative economic activity in Bar Reef, where the fishers initially started the existing tourism industry as an alternative livelihood and about 100 authorized tourism operators are presently in the area. Furthermore, there is much room for development of tourism industry with a proper plan both in Pigeon Island and Kayankerni seascapes. However, it should be developed with studies on carrying capacity of tourism activities at specific coral reef sites. While fishing remains the main economic activity in the Bar Reef and Kayankerni sanctuaries, tourism is the main activity in the PIMNP. While agriculture is also present in the surrounding area of all three seascapes, high unemployment and poverty levels persist especially due to lack of tourism and other forms of employment during the monsoon periods.

Three types of marine protected areas have been declared under the Fauna and Flora Protection Act (FFPA), namely Marine National Parks, Nature Reserves and Sanctuaries. The three selected priority seascapes include a Marine National Park and two Sanctuaries. Their management is weak and therefore human activities continue to degrade them [10, 11].

Seascape selection for SLCRI including climate 'refugia' coral reefs and MPAs: At the concept stage, the Sri Lanka Coral Reef Initiative (SLCRI) was developed to include six priority climate 'refugia' coral reef, including five MPAs administered under the Department of Wildlife Conservation (DWC). Sites in Sri Lanka initially identified were (in alphabetical order) the BRS, Hikkaduwa Marine National Park (HMNP), KS, PIMNP, Silavatturai-Arippu-Vankalai coral reef cluster and the Vidattaltivu Nature Reserve (VNR). However, surveys conducted over the project preparatory phase indicated the difficulty of achieving multi-faceted conservation and development goals anticipated through the programme in all six sites simultaneously within the first phase of the programme. Hence, in consultation with the GFCR, an evidence-based prioritization scheme was used in selecting three of the above sites for the implementation of phase I of SLCRI. This prioritization was based on factors such as the resilience of the

[13] GCRMN (2020) Status and trends of coral reefs of the South Asia region. In: *Status of Coral Reefs of the World 2020* (eds. D. Souter, S. Planes, J. Wicquart, M. Logan, D. Obura & F. Staub). Australian Government, Australian Institute of Marine Science.
[14]MOE (2022) Fisheries statistics 2022. Ministry of Fisheries, Maligawaththa, Colombo.
[15]SLTDA (2019). Survey on Departing foreign tourists from Sri Lanka 2018-2019, Sri Lanka Tourism Development Authority.

reefs indicated after the El Niño impact in 1998 and 2016 [16,17], biodiversity value as indicated by the live coral cover and the fish species richness[18], potential to generate revenue streams[19], opportunities to engage private sector, and an established MPA where law enforcement mechanism through the Department of Wildlife Conservation (DWC) is available. Background data collected through (a) bio-physical and socio-economic surveys conducted in all six sites during the project preparation, and (b) published secondary sources of data, and were used for this scoping exercise. Furthermore, the SLCRI considered larger seascapes including s*ocio-ecological* influence areas of the above MPAs, not limiting the project to areas with corals and/or areas declared as MPAs. The three selected coral associated priority seascapes included the Bar Reef seascape, Kayankerni seascape, and the Pigeon Island seascape, hereafter referred to in this document as 'priority seascapes'. Each priority seascape will comprise an MPA and several Locally Managed Marine Areas (LMMAs) and peripheral areas from where marine and coastal resources are extracted. This programme also indicates the possibility of using the other coral associated seascapes for upscaling the SLCRI interventions in phase II and III of the programme.

1.2 Policy and Legislative Context

Sri Lanka has several direct and indirect policies and legislations aimed at protecting marine and coastal environment.

The **National Environment Act (NEA)** No. 47 of 1980 and its subsequent amendments in 1998, 2000 and 2005, serve as the principal legislation for environmental protection in the country. This is administered by the Central Environmental Authority (CEA). NEA is the Act in Sri Lanka to make provisions for the protection and management of the environment during development projects. The CEA uses Environment Protection Licenses (EPL) and Environmental Impact Assessment (EIA) as two tools to enforce the NEA. Further, the CEA is also responsible for the prevention of pollution in the country including the inland aquatic environment as well as the coastal belt.

Coral reefs are protected primarily under two parliamentary Acts, namely the **Coast Conservation and Coastal Resources Management Act (CC&CRMA)** No.49 of 2011 and the **Fauna and Flora Protection Act (FFPA)** No. 22 of 2009. The **CC&CRMA** regulates all development activities within the Coastal Zone, which is limited to 2 km offshore and 300 m on land except in lagoons and rivers where the landward boundary extends 1 km from the highwater mark at the sea outfall.

The **FFPA** No. 22 of 2009 affords protection to several marine species including marine mammals, sea turtles, reef fish, hard and soft corals, gorgonians, several species of molluscs and echinoderms. Additionally, all marine protected areas are declared under the FFPA. However, the FFPA lacks special regulations for the marine protected areas and uses the regulations designed for the terrestrial protected areas. The FFPA takes precedence over all other Acts when it comes to the protection of wild fauna and flora in the country.

16 Rajasuriya, A. (2005). The status of coral reefs in Sri Lanka in the aftermath. Coral Reef Degradation in the Indian Ocean, 83.
17 Thilakarathne, E.P.D.N., Jayarathna, W.N.D.S., Sewwandi, S.W.R. et al. Tropical coral reefs in Sri Lanka are threatened due to the fluctuation of seasonal and interannual sea surface temperature. Environ Monit Assess 195, 756 (2023). https://doi.org/10.1007/s10661-023-11381-9
18 Coker, D. J., Graham, N. A. J., & Pratchett, M. S. (2012). Interactive effects of live coral and structural complexity on the recruitment of reef fishes. Coral reefs, 31, 919-927.
19 Cesar, H. S. J. (2002) Coral reefs: their functions, threats and economic value. In Collected Essays on the Economics of Coral Reefs, ed. H. S. J. Cesar. University of Kalmar, Kalmar. 14–39.

The **Fisheries and Aquatic Resources Act** (**FARA**) No. 2 of 1996 and its amendments have provisions to manage, regulate and conserve all fisheries and aquatic resources and all fishing operations including high seas fishing. Spearfishing and the use of illegal fishing methods including certain types of fishing gear, and the use of poisons and explosives for fishing purposes are banned under the FARA. The (Amendment) Act of FARA in 2016 provides for the protection of fish habitats and bans the removal or destruction of mangroves as they serve as a fish habitat.

Additionally, the Marine Environmental Protection Authority (MEPA) was established under the **Marine Pollution Prevention Act** No. 35 of 2008, which provides for the prevention, control, and reduction of marine pollution. The **Coast Guard Act,** No. 41 of 2009 established the Sri Lanka Coast Guard to ensure maritime traffic safety, protect the marine environment, prevent, and combat maritime disasters, and cooperate with domestic and foreign organisations for the purpose of protecting national interests in coastal and marine areas. The **National Aquatic Resources Research and Development Act,** No. 54 of 1981 established the National Aquatic Resources Research and Development Agency (NARA) under the Ministry of Fisheries and Aquatic Resources Development, with responsibilities of conducting research and development on living and non-living resources in all aquatic environments of the country and advising other government organisations on the status of the aquatic environment. However, NARA does not have the power to enforce regulations to protect the aquatic resources.

The Ministry of Environment is responsible for the overall coordination of the above organisations in ensuring the protection of the environment, including its coastal and marine component.

When the SLCRI is concerned, the CC&CRMA, FFPA and the FARA are the key pieces of legislation regarding the management/sustainable use and conservation of coastal and marine resources. Regulatory policy environment provided by the CC&CRMA supports coral positive/sustainable investments and co-management with private sector and public participation, through the Coastal Zone Management Plan (CZMP; now termed as Coastal Zone and Coastal Resource Management Plan (CZ&CRMP)) of the Coast Conservation and Coastal Resource Management Department (CC&CRMD). The FARA also promotes private sector investments in fisheries. However, FFPA does not support blended finance investments and co-management within protected areas governed by the Department of Wildlife Conservation (DWC). The lack of flexibility required for the blended finance framework in FFPA limits the intentions of the SLCRI programme within the MPAs. Hindrances in FFPA to co-manage and blended finance MPAs such as the rigidity of guidelines to engage other partners in management, and commercial use of resources within MPAs, has led the SLCRI to focus on larger seascapes. In such seascapes multiple parties can play different roles within predetermined zones, ensuring the sustainable co-management of entire areas, including the existing MPAs and LMMAs to be declared under the programme.

Therefore, the CC&CRMA and the Coastal Zone and Coastal Resource Management Plan (CZ&CRMP) has been identified as the most suitable legislation for blended financed public-private partnerships intended through the SLCRI, and the IUCN SL is already in the process of declaring the three programme seascapes as 'Special Management Areas (SMAs)' under the upcoming CZ&CRMP. For example, the CZMP 2018 already have the following provisions to facilitate initiatives such as the SLCRI;

1. Promote participation of private entrepreneurs in managing coral reefs located in the respective tourism development areas with required community participation.
2. Control discharges and sedimentation from development activities through regulatory measures (permits, EPL, EIA/IEE) in collaboration with relevant agencies.
3. Enhance livelihoods of the coastal communities through non-extractive uses of the coral reefs in tourism areas in collaboration with the private sector involvement.

4. Initiate community surveillance programmes with DWC to minimize negative impacts on coral reefs related to tourism, recreation, and fisheries activities.
5. Initiate collaborative programmes with hotels/Tourist Board to provide interpretative facilities in hotels in areas with potential for coral reef viewing to increase enjoyment of the resource and for conservation.
6. Promote awareness among tourists and tour guides on the conservation status of reefs and reef organisms through collaborative programmes with the Tourist Board, hotels and tour operators, Customs and Airport authorities.
7. Coordinate and support customised training programmes and reference material to assist with identifying coral reef organisms prohibited for export for relevant state officials.
8. Promote and conduct coral reef transplantation programme in coral reef degraded areas with the assistance of the National Aquatic Resources Research and Development Agency (NARA), Universities, and associated communities.

The preparation and validation of the CZ&CRMP is under the mandate of CC&CRMD, which is one of the key implementing partners of the SLCRI. The seascapes identified for SLCRI were presented to and discussed during the stakeholder consultation meetings for the preparation of the CZ&CRMP, and the CC&CRMD has assured that these seascapes will be approved as SMAs under the CZ&CRMP 2024. Hence the SMAs are expected to be declared during the first phase of the SLCRI programme.

Furthermore, the poor enforcement of the FARA regulations regarding destructive fishing is well known. The Co-Management Committees (CMCs) for each seascape guided by the National Advisory Committee will engage all stakeholders including the fishers involved in destructive fishing practices to conserve and manage marine resources. The CMCs will include the Sri Lanka Coast Guard who will assist implementation of the regulations of FARA as well as FFPA with requests and required inputs allocated.

Healthy coral areas and other sensitive ecosystems are found in the adjacent areas of our priority MPAs of BRS, PIMNP and KS, that serve as spawning and nursery grounds for many species of reef fish and are sources and sinks for larvae and juveniles of many coral reef species. In addition, some threats such as pollution originate from outside the priority protected areas. Therefore, including the surrounding areas of each priority MPA within the seascapes improves biodiversity conservation through effective management. Selected areas from each seascape will be made into LMMAs during the SLCRI programme implementation. These seascape areas will be established and managed through the Coast Conservation and Coastal Resources Management Act (CC&CRMA) by the Coast Conservation and Coastal Resource Management Department (CC&CRMD), as the Act has legal provisions to establish seascapes as SMAs. Furthermore, LMMAs will be identified within them for specific management arrangements, which are to be legalised and institutionalised through the SLCRI programme as areas managed by local communities within SMAs under the Coastal Zone and Coastal Resource Management Plan (CZ&CRMP). At least one LMMA within the Kayankrni seascape would be legally declared and institutionalised within the Phase I of the SLCRI with the hope of upscaling into other two seascapes during latter phases with the hope for a national upscaling beyond the programme.

Co-management of fishery resources have already been attempted by NARA with DFAR, through CMCs formed at Kalpitiya, Matara and Kalmunai areas in Sri Lanka under the CENARA project, which produced the Fisheries Atlas of Sri Lanka. However, the management mechanism did not sustain due to the government entities failing to take and maintain the leadership until the system was fully adopted by the locals. Further, there was no sustainability of financing co-management mechanism beyond the project period. However, co-management has been successful to an extent in management of freshwater

fisheries in Senanayake Samudra, where the access to resources in the water body is somewhat controlled unlike in the open ocean setting.

According to the background studies major hindrances to co-management and the blended financing for MPA management would come from fisheries management. Because the fishing licenses do not differentiate Fisheries Management Areas (FMAs) or SMAs, which needs to be discussed and sorted out between the CC&CRMD and Department of Fisheries and Aquatic Resources (DFAR). Furthermore, MPAs are inside the proposed seascapes in which the FFPA will be enforced by the DWC, with stricter regulations on resource extractions. However, species of concern will be using the entire seascape emphasising the need for a paradigm shift towards a co-management plan including the MPA area. What is required in these seascapes is harmonising the regulations and activities of DWC, DFAR and CC&CRMD within the seascapes declared under the CC&CRMA as SMAs. Furthermore, a mechanism needs to be developed to channel the revenue from the SMA (including the MPAs in it) to a Conservation Trust Fund. The FFPA specifically states that the commercial misuse of fauna, flora and their habitat should be prevented, allowing the DWC to carry out appropriate commercial use of the resource ensuring its sustainability.

Furthermore, National Policy Framework for SME Development (2017) act as the key national policy supporting SMEs in Sri Lanka envisioning to adapt SMEs to large scale and sustainable business entities and allowing them to realize their full potential in today's globalized economy. Additionally, sectoral polices and legislations may also apply depending on the type of SMEs such as agriculture, manufacturing, etc. in addition to the Government Fiscal and Monitory Polices. However, similar policies on impact investments are still under development and the lack of clarity in such aspects are barriers to be removed during the delivery of the SLCRI programme. However, there are some institutional and legislative barriers for the successful implementation of SMEs in Sri Lanka. Among the institutional barriers they lack, procedural support from government authorities, support for International Organization for Standardization (ISO) certifications, finances from financial institutions, support in raw materials, energy, labour, and waste management, support for transition to renewable energy, access to new technology, access to markets and market information, risk awareness, innovation, value addition and skills development, export barriers, and high competition from import goods. There is little coordination among relevant government authorities supporting SMEs, extension facilitation, and public pressure. Legislative obstacle such as weak and outdated legislative provisions, weak law enforcement and inadequate penalties, lack of awareness about policies and regulations, lack of support from existing policy framework and regulatory government agencies, and issues pertaining to compliance with environmental laws also hampers the development of SMEs in Sri Lanka

Having these different interests and somewhat overlapping legal and institutional setting, the proposed co-management arrangements will do the harmonization of regulations and activities of DFAR, DWC and CC&CRMD within the seascapes is required.

1.3 Institutional Context

National Governance: The Ministry of Wildlife and Forest Resource Conservation (MoW&FRC), Ministry of Enviornment (MoE) and the Ministry of Fisheries (MoF) are the key government ministries responsible for conservation and sustainable management of the coral reef and associated ecosystems in Sri Lanka. The DWC, which comes under MoW&FRC, manages eight marine MPAs and is responsible for protecting coral reefs and other associated species by implementing the FFPA. The Department of Fisheries and Aquatic Resources is the main institute that comes under the MoF and is mainly responsible for the

sustainable extraction of marine resources in Sri Lanka. In addition, several government agencies are working towards conservation and sustainable management of coral reefs and other marine ecosystems, including the MEPA, CC&CRMD, CEA, and Sri Lanka Coast Guard. The NARA is mainly responsible for the research and development related to fisheries and aquatic resources including coral reefs.

Regional Setup: The District and Divisional Secretariats are the key regional authorities responsible for administration and coordination of community interventions. They provide oversight from District level to Divisional level to local administrative unit (= *Grama Niladhari Division*/GND) level to hamlets. Regional units have been established within most of the organizations mentioned in the national governance section to regulate the regional activities related to fisheries, coral reefs, and tourism. The administrative and technical services for coral-dependent communities are provided at field level by the provincial and regional setups of the Department of Fisheries and Aquatic Resources. Furthermore, there are regional setups with the Federation of Chambers of Commerce and Industry of Sri Lanka (FCCISL) to support on Small and Medium Enterprises (SMEs) and businesses in areas that the SLCRI has its priority seascapes.

Non-Government Involvement: Several non-governmental organisations are working in marine sector which includes Blue Resource Trust (BRT), Ocean Resource Conservation Association (ORCA), Wildlife and Nature Protection Society (WNPS), Sarvodaya, Environmental Foundation (Guarantee) Limited (EFL), Lanka Environment Fund (LEF) and National Fisheries Solidarity Movement (NAFSO).

International Organization Involvement: UNDP, IUCN, UNEP, the World Bank, and ADB mobilise overseas resources for marine conservation in Sri Lanka.

Private Sector Involvement: Biodiversity Sri Lanka (BSL) chanelles corporate funding to biodiversity conservation requirements in the island. Corporates such as Dilmah Conservation, Tokyo Cement, INSEE, Sampath Bank, National Development Bank PLC., Commercial Bank of Sri Lanka, and Hongkong and Shanghai Banking Corporation (HSBC) are private sector agencies that support marine conservation in Sri Lanka, mostly under their CSR budgets. BSL in collaboration with IUCN SL has already launched a campaign to lobby corporate partners for a collation of CSR funding to support the SLCRI programme in Kayankerni seascape. Further, the BSL is in partnership with Ceylon Chamber of Commerce (CCC) (the oldest chamber of commerce and the one in which largest corporate bodies are part of), IUCN and Dilmah Tea. It is expected to bring CCC into the National Steering Committee of the SLCRI to see that it unfolds in large private sector friendly manner to attract large companies to invest in coral reef conservation as outlined by SLCRI. Financing institutions such as HSBC, and DFCC (a Local Bank with GCF Accreditation for concessionary financing) have expressed interest in supporting SLCRI. SLCRI will also work with the Central Bank of Sri Lanka (CBSL) to tap into sustainable financing initiative, where Sri Lankan Banks have come together in providing concessionary financing to investing in nature. Initial discussions with Nation's Trust Bank will play a leading role in the initiative.

All the institutions mentioned above are related to the financing of marine environment and its sustainability, while potential private sector partners are to be engaged for local investments. However, severe financing gaps for co-management were observed in the three priority seascapes, which are elaborated below under section 3 – Priority Implementation Sites. Therefore, The SLCRI programme will engage with the Chambers of Commerce and other financial institutions and banks to leverage investment and to bring in potential corporate partners. Furthermore, IUCN SL has already engaged in preliminary discussions with the Deliberate Capital representing the GFCR investment fund to support the programme with global investment platforms.

1.4 Ongoing / proposed projects and initiatives

Ongoing Projects

There are several ongoing public, private, and non-government sector projects in the seascapes proposed for SLCRI programme.

Blue Resource Trust (BRT) is working in Kayankerni (Passikudah) and other reef areas with Tokyo Cement to understand factors affecting the resilience of coral reefs to coral bleaching and climate change. Additionally, Blue Resource Trust is investigating the links between Seagrass meadows and food security in northwestern coastal areas including Puttalam lagoon. Tokyo Cement is also collaborating with the Sri Lanka Navy, Wildlife Research and Conservation Trust (WRCT), and the Foundation of Goodness for Coral Conservation, particularly along the eastern coastline of Sri Lanka, including Pigeon Island National Park and Kayankerni Sanctuary. BRT will partner with the SLCRI in Pigeon Island and Kayankerni seascapes, as a research and implementation partner, as they have already served during the programme preparation phase. They are also engaged in Kayankerni and largely in Batticaloa District on Oceans5 MPA Project that aims to both expand areas under management and improve management effectiveness in collaboration with DWC and DFAR, supporting district level FMAs, management of MPAs and improving IUU fisheries management, and the project may also fund PIMNP in 2024/25.

Environmental Foundation (Guarantee) Limited (EFL) is working in the Bar Reef Sanctuary and the Kayankerni Sanctuary with the European Union-funded Corporate Linked Bonds with Return Improvement (COLIBRI) project together with the BRT, which aims to protect, preserve, and restore biodiversity clusters in Sri Lanka. This project will safeguard these fragile coral reef ecosystems by promoting inclusive, data driven management of natural resources and more sustainable livelihood practices. The COLIBRI project supports the DWC in implementing the ecological, operational, governance, and socioeconomic management of the Bar Reef Sanctuary (BRS) to achieve the vision set out in the Management Plan, prepared for the GEF funded Enhancing Biodiversity Conservation and Sustenance of Ecosystem Services in Environmentally Sensitive Areas project. EFL will be made an implementation partner of the SLCRI in Bar Reef, as the existing management plan they prepared for the Sanctuary will be built-in to the seascape co-management plan. Furthermore, the EFL will contribute to SLCRI by reviewing and enabling legal and institutional setting for operation of conservation trust funds in Sri Lanka.

Furthermore, the Biodiversity Sri Lanka, a coalition for environmental conservation among the corporate sector intends to bring in cooperate partners from the private sector, including banks to finance coral reef conservation and restoration in selected priority seascapes. Additionally, although not in an organised way, several private sector partners such as Tokyo Cement and INSEE and some private banks such as Sampath Bank, National Development Bank PLC., Commercial Bank of Sri Lanka, and Hongkong and Shanghai Banking Corporation (HSBC) have been supporting coral reef conservation and/or restoration as part of their CSR projects.

The Mannar Region Systemic Solution for Marine Litter (MARESSOL) project is working in Bar Reef and other reef areas to study the macro and micro plastic impact, and establish best practices and guidelines for managing Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFGs) in the region. MARESSOL project, especially in the Bar Reef will provide technical support to SLCRI in enabling co-management and making a conducive environment for reef resilience by reducing plastic based pollution.

NAFSO is a key facilitator to the development of the national fisheries policy for Sri Lanka and organizes fishermen to lobby the government to defend their rights and to bring about good environmental practice in coastal areas.

The Ocean Country Partnership Programme (OCPP) of the Government of UK also works in Sri Lanka towards a well-managed MPA system. Their work on MPAs will have direct relevance to the SLCRI as they would work towards sharing best practices in MPAs across the world, especially in areas of marine biodiversity, climate change, pollution control and sustainable seafood. OCPPs MPA management guidelines will provide a baseline for larger seascapes co-management plans and synergies for their implementation and relevant assessments, including the Protected Area Management Effectiveness (PAME) assessments using the Management Effectiveness Tracking Tool (METT). Their support to the Government in the national marine spatial plan, and the national blue carbon habitat map would also provide important insights to the SLCRI. The three seascapes selected as priorities for the SLCRI encompass the three MPAs that OCPP has agreed to deliver in-depth METT-4 PAME assessments for the DWC in their financial year 2023/2024. Hence these assessments will provide a solid baseline for IUCN to build off under the SLCRI project and expand to the entire seascape. Furthermore, as the OCPP will be running it with all stakeholders involved (government, NGOs, local community, fishers, tourism etc) the momentum it creates can be positively synergised through the SLCRI, also taking lessons learnt by OCPP in co-managing marine and coastal systems in Belize and Maldives, together with inputs for sustainable financing of MPAs.

The Ministry of Environment will implement GEF-funded projects on Integrating Participatory Biodiversity Centred Approaches. The-funded project on Natural Capital Accounting and Assessments in coastal and marine environments (NCAA), for which IUCN SL acts as the GEF accredited agency in three coastal areas in Sri Lanka is right at its inception stage. Pigeon Island will be a part of the eastern region and Bar Reef will be a part of Northwest region of the NCAA project, and hence the said project will co-finance the SLCRI through the establishment and operationalisation of FEMA.

The CEA and the MEPA are engaged in pollution control in marine areas. Additionally, several private and non-government agencies are engaged in the prevention of marine pollution.

There is renewed interest at the national level in investing in nature. Aforementioned NCAA project will conduct Natural Capital Assessment and Accounting in a pilot scale for selected coastal ecosystems. Furthermore, Marine Spatial Planning by OCPP, current preliminary work on Debt-for-nature swaps in Sri Lanka by Global Green Growth Initiative's (GGGI), Biodiversity Financing Initiative (BIOFIN) by UNDP, initiative on assessing ecosystem services of priority ecosystems using InVEST model by ADB, Sri Lanka Green Financing Taxonomy and the Road Map for Blue Bonds by Central Bank of Sri Lanka are a few such ongoing initiatives in Sri Lanka. In this backdrop the country is getting ready to create an enabling environment for investing in nature. Progress made in these discussions at the national level in blue economy will facilitate SLCRI venturing into impact investment, blue bonds, biodiversity offsets and bioprospecting etc. with less resistance from interested parties.

Proposed Projects

The Bay of Bengal Large Marine Ecosystem (BOBLME) Project is a GEF funded regional project that will be implemented in Bangladesh, India, Indonesia, Malaysia, the Maldives, Myanmar, Sri Lanka, and Thailand. This project will also bring resources to coastal zone management in proposed seascapes of the SLCRI programme.

2 Programme Strategy

2.1 Problem Statement

Coastal and marine ecosystems, especially coralreefs, are currently under threat due to anthropogenic and climate pressures, causing a loss of live coral cover in reefs of Sri Lanka over the past few decades. Marine biologists report that 45% of Sri Lankan coral reefs are susceptible to major local threats such as a) overfishing and destructive fishing practices, b) unsustainable tourism, c) coastal development, and d) pollution loadings from land and sea sources, that are compounded by climate induced impacts such as changes to ocean temperature regime, acidification, and coral bleaching. The main barriers to reversing coral reef degradation in Sri Lanka, the lack of integrated planning, effective management mechanisms and adequate financing, as well as the scarcity of adequate baseline data are to be addressed through the SLCRI by using approaches of co-management in larger seascapes encompassing MPAs, innovative and blended financing mechanisms to address financing gaps and support coral positive businesses and research aspects especially on coral reef ecosystem restoration.

2.2 Strategic Vision and Theory of Change

The proposed SLCRI is expected to focus on coral associated seascapes of Bar Reef, Kayankerni and Pigeon Island that act as healthy climate 'refugia'. SLCRI will strengthen protection of priority coral associated seascapes by promoting a co-management approach that integrates all concerned agencies under a well-developed co-management plan. These larger ecological boundaries will be incorporated into the Coastal Zone and Coastal Resource Management Plan (CZ&CRMP) being currently revised by Coast Conservation and Coastal Resources Management Department (CC&CRMD) as mandated by their Act, to provide required legal backing for Special Management Areas (SMAs). In implementing those plans, innovative financing mechanisms for coral positive investments will be promoted by removing barriers for investing in nature. In alignment with a blended finance approach, GFCR grant funds will be partly used to de-risk private sector investments in coral associated ecosystems through the Coral Positive Business Support Facility, with additional finances when necessary from sescape specific CORALL (Conservation of Reefs for All Life and Livelihoods) Conservation Trust Funds (CCTFs).

Reef-dependent livelihoods will be transformed to reef positive livelihoods through promoting coral associated entrepreneurial capacity building programs and incentives. Local youth and vigilant groups will be empowered to take up roles in co-management contributing to effective enforcement of rules and regulations in the co-management area. Best practices for coral-positive businesses in Maldives will be adopted through Regional Cooperation Mechanism to be established by SLCRI. Social security will be enhanced through extending the disaster risk reduction modalities into reef-dependent communities and through collaborative attempts to create a coral reef conservation trust fund established at each site to support actions including social safety.

While the above attempts are to ensure sustainable management of existing reefs, special attention will be provided in SLCRI to identify areas needed to be restored using best science available. Required policy support, guidelines, appropriate technology, and partnerships will be developed and promoted to make scientific restoration and where possible as a business venture such as reef restoration and research-based tourism. Success of SLCRI will be measured using Management Effectiveness Tracking Tool (METT) applied at all sites and appropriate corrective actions will be taken in the process based on findings.

The proposed Theory of Change is expected to address the main weakness of lack of joint planning, joint implementation, and lack of resources. In SLCRI proposed seascapes are expected to be managed through co-management plans by public-private-people partnerships supported by GFCR funding, other co-finances, and innovative blended financing mechanisms.

The SLCRI will create a pipeline of sustainable and bankable ecosystem friendly and coral-positive businesses and projects. It will initially cover a population of about 150,000 living in the landscapes connected to climate refugia coral reefs but having overall influence on the coastal and marine ecosystems. The actual number of direct and indirect beneficiaries will be much higher including the stakeholders involved in the use and in the value chains.

The strategic vision of the (SLCRI) is illustrated in the Figure 2 below, linking its three major solutions to the co-management arrangements, and its ultimate contributions to achieving Sustainable Development Goals. The figure emphasizes the central role played by co-management mechanisms in each seascape which would be managed by a government department (DWC in the Pigeon Island seascape, CC&CRMD in Bar Reef seascape, and DFAR in the Kayankerni seascape).

Financial sustainability will be ensured through the central solution of the programme, the Solution 1: CORALL (Conservation of Reefs for All Life and Livelihoods) Conservation Trust Funds (CCTFs) to be established in each seascape and managed by an NGO under the supervision of seascape co-management committee. This is intended to sustain the financing of effective MPA management and law enforcement, ultimately contributing to the successful co-management of the entire seascape. The livelihood enhancement and additional revenue generation will happen through solutions 2: Coral Positive Business Support Facility (CPBSF) and 3: Innovative Financing from Blue Economy Options (IFBEO) with technical assistance from the programme in addition to the initial grant support. All the revenue generating activities in the seascape will ultimately be contributing to the CCTFs as a payment for the ecosystem services which sustain their revenues. Hence over time the grant dependence of the SLCRI is meant to be reduced with sustainable blended finances taking over the seascape management. Hence during the phase I of grant funding the SLCRI, especially the solution 1 expects a larger capitalization from the GFCR grant, which eventually will be replaced by reef positive business revenues and even larger impact investments.

The above strategy has further been developed into the Theory of Change of the SLCRI as depicted in Figure 3, where the programme outputs leading to the three major outcomes are aligned to remove the global and local threats affecting the survival of climate 'refugia' coral reefs found within the said seascapes in Sri Lanka, further supporting nine of the sustainable development goals and all four GFCR outcome areas.

The programme will be implemented for six years across three phases. Phase I will last 18 months (1.5 years) and serve as the initiation phase where enabling environment is created for reaching the programme objectives, setting up of physical and community structures to support co-management and the establishment of and operationalisation of Programme Management Unit, the Business Support Facility and necessary mechanisms and piloting of its activities are intended. Phase II of the programme counts for another 18 months (1.5 years), where the programme activities will be expanded towards the target impacts, during which the solution I and II of SLCRI will be implemented in full swing with replication of activities initiated in Phase I, while the solution III will start its implementation. The next three years will mark the phase III of the programme where all intended activities will be matured and achieving their

financial sustainability towards the end. This period will also be used to plan a smooth exit strategy for the programme, ensuring that co-management mechanisms in priority seascapes are self-sustainable.

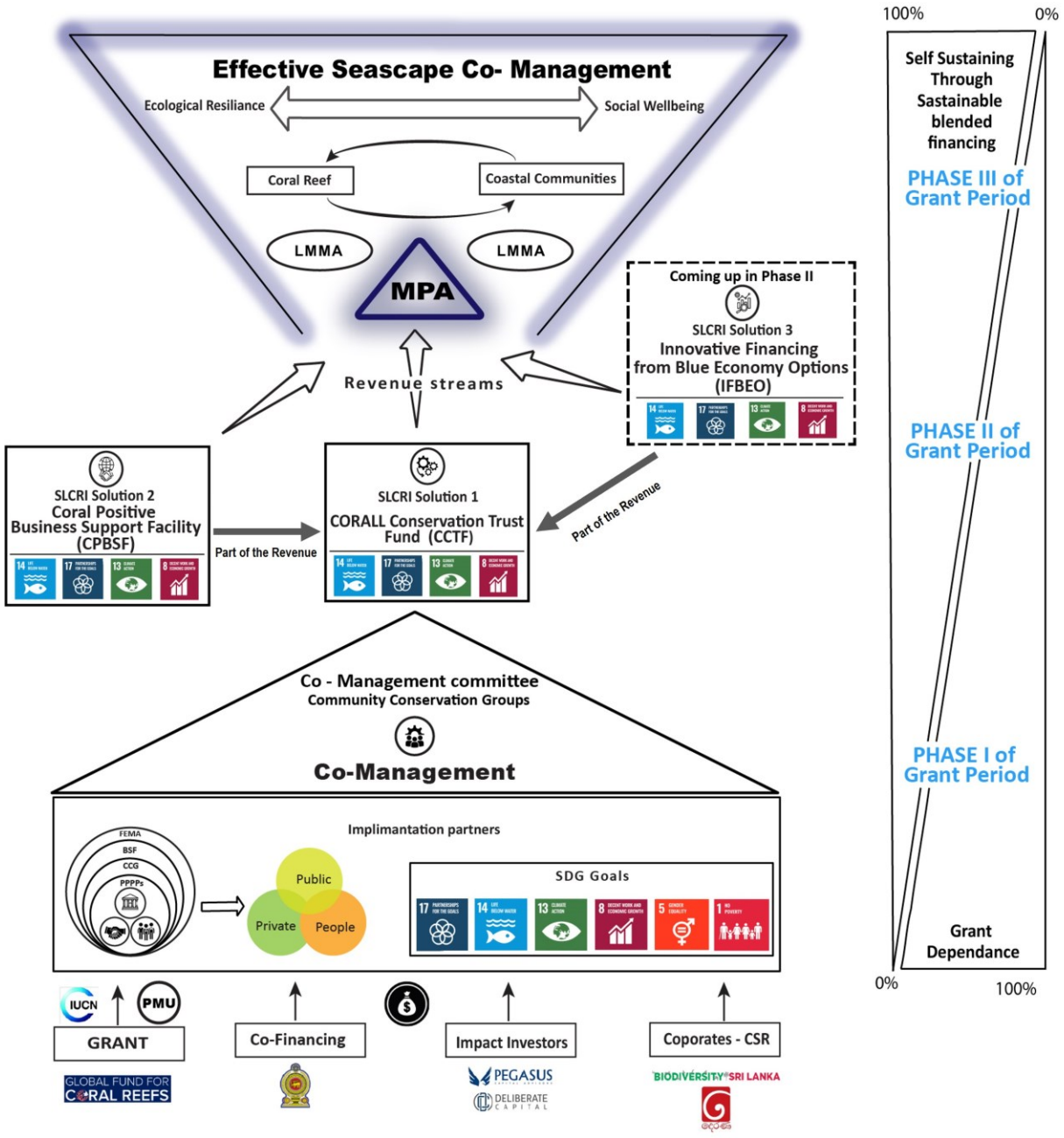


Figure 2. Graphical presentation of the strategic vision of Sri Lanka Coral Reef Initiative (SLCRI) linking its solutions to the co-management arrangements, and contributions to Sustainable Development Goals.

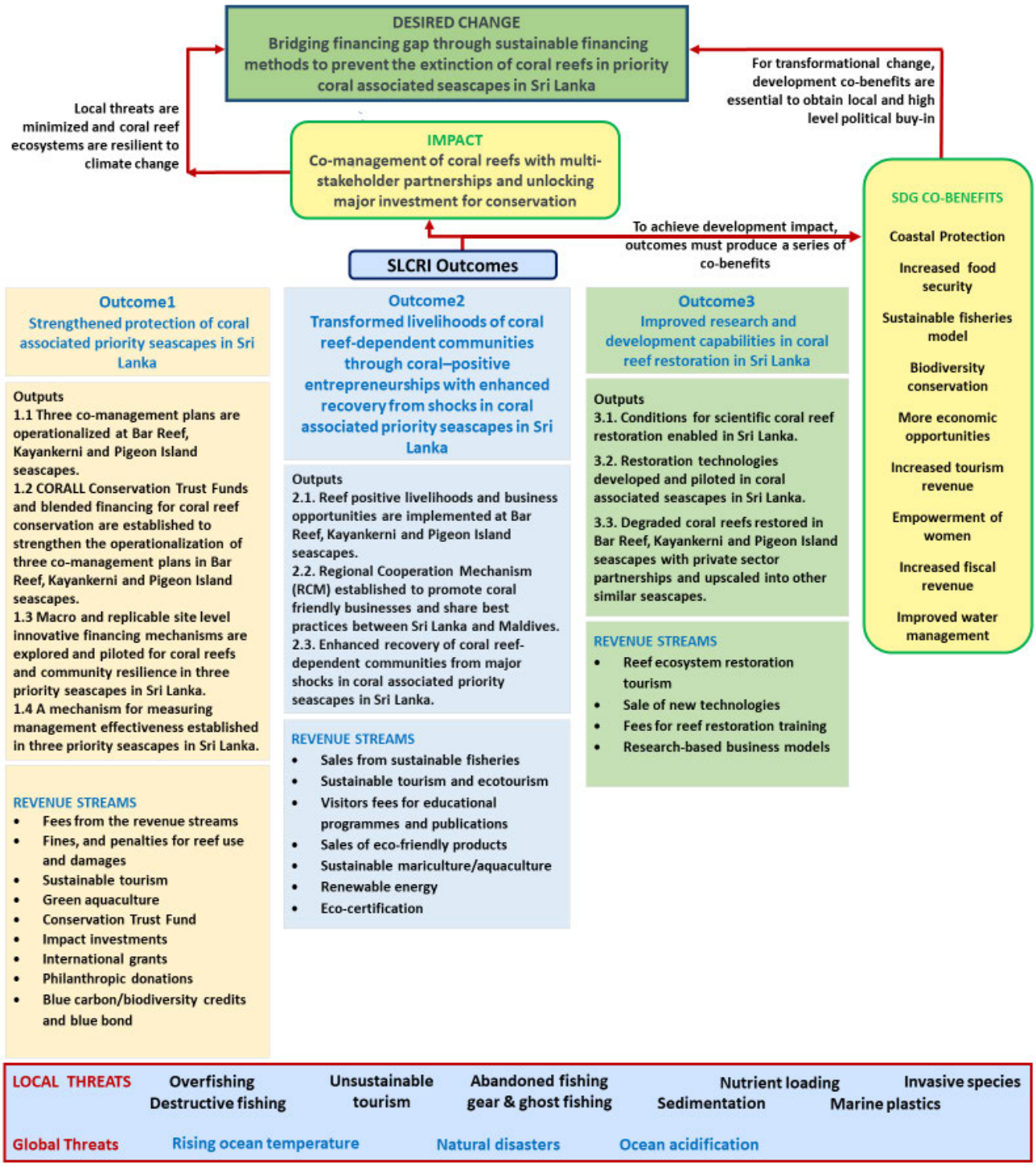


Figure 3. Theory of Change of the Sri Lanka Coral Reef Initiative

2.3 Programme outcomes, outputs and activities

Table 1: Overview of Outcomes, outputs and activities

Outcome 1: Strengthened protection of coral associated priority seascapes in Sri Lanka.	
Output 1.1: Three co-management plans are operationalized at Bar Reef, Kayankerni and Pigeon Island seascapes.	
Activity 1.1.1: Preparation and implementation of youth and gender-inclusive co-management plans through establishing Co-Management Committees (CMCs) for each priority seascape and demarcation of management zone boundaries including Locally Managed Marine Areas (LMMAs).	Phase I & II
Activity 1.1.2: Establishment of a sub-committee of the national Forum for Ecosystem Management and Advocacy (FEMA) for each seascape and building its capacity.	Phase I
Activity 1.1.3: Establishing/empowering gender-inclusive Community Conservation Groups (CCGs) comprising local youth under each seascape CMC to support law enforcement authorities in (a) stopping destructive fishing practices including blast fishing, and (b) implementation of regulations to protect coral reefs and their resources.	Phase I
Activity 1.1.4: Conducting capacity building programs for members of CMCs, CCGs and other stakeholders with an emphasis on women and youth in each seascape.	Phase I & II
Output 1.2: CORALL Conservation Trust Funds and blended financing for coral reef conservation are established to strengthen the operationalization of three co-management plans in Bar Reef, Kayankerni and Pigeon Island seascapes.	
Activity 1.2.1: Legal and institutional review and a feasibility study on establishing Conservation Trust Funds (CTFs) for coral reef conservation in three priority seascapes and identification of management arrangements to enable CTF establishment.	Phase I & II
Activity 1.2.2: Establishment and operationalisation of a seascape level CORALL CTF with identified management arrangements.	Phase I & II
Activity 1.2.3: Upscaling of above modalities into other coral associated seascapes such as Hikkaduwa Marine National Park, Silavatturai-Arippu-Vankalai coral reef cluster and Vidattaltivu Nature Reserve.	Phase II & III
Output 1.3: Macro and replicable site level innovative financing mechanisms are explored and piloted for coral reefs and community resilience in three priority seascapes in Sri Lanka.	
Activity 1.3.1: Feasibility studies on innovative financing mechanisms such as bio-credits, blue bonds, and Debt for Nature Swaps (DfNS) for each priority seascape.	Phase I,
Activity 1.3.2: Adoption and piloting of at least one innovative financing mechanism for coral reefs and community resilience in Bar Reef, Kayankerni and Pigeon Island seascapes.	Phase II & III
Output 1.4: A mechanism for measuring management effectiveness established in three priority seascapes in Sri Lanka.	
Activity 1.4.1: Building the capacity of CMCs and CCGs to adopt the management effectiveness tracking tool (METT) in each seascape.	Phase I, II & III
Outcome 2: Transformed livelihoods of coral reef-dependent communities through coral–positive entrepreneurships with enhanced recovery from shocks in coral associated priority seascapes in Sri Lanka.	
Output 2.1: Reef positive livelihoods and business opportunities are implemented at Bar Reef, Kayankerni and Pigeon Island seascapes.	

Activity 2.1.1: Feasibility studies on coral friendly livelihoods and women's and youth involvement in coral reef related enterprises, to identify gaps and development potentials and propose recommendations.	Phase I
Activity 2.1.2: Establishment of a Coral Positive Business Support Facility (CPBSF) to provide necessary support on different livelihood opportunities and business development for coral-dependent communities in three priority seascapes.	Phase I
Activity 2.1.3: Implementation of coral friendly business and reef related enterprises under the guidance of the CPBSF, enhancing livelihoods of coral-dependent communities in three priority seascapes.	Phase I, II & III
Output 2.2: Regional Cooperation Mechanism (RCM) established to promote coral friendly businesses and share best practices between Sri Lanka and Maldives.	
Activity 2.2.1: Identification of stakeholders for the RCM, its establishment and coordination through the CPBSF.	Phase I
Activity 2.2.2: Assessment of best practices for coral-friendly tourism in Maldives and identification of learning opportunities for Sri Lanka.	Phase I
Activity 2.2.3: Implementation of appropriate nature-based tourism and/or eco-tourism ventures uniquely identified for each priority seascape with staff exchange programs, training, and collaborative tourism ventures through the RCM.	Phase II & III
Output 2.3: Enhanced recovery of coral reef-dependent communities from major shocks in coral associated priority seascapes in Sri Lanka.	
Activity 2.3.1: Disaster risk reduction mechanism established in each priority seascape to enhance the preparedness and response to natural hazards on communities.	Phase I & II
Activity 2.3.2: Social safety net systems established for reef dependent communities and mechanisms developed to mobilize financial support to reef-first SMEs impacted by shocks.	Phase I, II & III
Activity 2.3.3: Upscaling above mechanisms into other coral associated seascapes such as Hikkaduwa Marine National Park, Silavatturai-Arippu-Vankalai coral reef cluster and Vidattaltivu Nature Reserve.	Phase II & III
Outcome 3: Improved research and development capabilities in coral reef restoration in Sri Lanka.	
Output 3.1: Conditions for scientific coral reef restoration enabled in Sri Lanka.	
Activity 3.1.1: Development of a National Policy Framework and Strategic Guidelines for Coral Restoration in Sri Lanka.	Phase I
Output 3.2: Restoration technologies developed and piloted in coral associated seascapes in Sri Lanka.	
Activity 3.2.1: Feasibility studies on appropriate coral restoration technologies for each priority seascape.	Phase I & II
Activity 3.2.2: Adoption and piloting of (a) appropriate strategies for implementation of recommended reef restoration techniques, and (b) novel techniques in coral restoration including coral propagation in Bar Reef, Kayankerni and Pigeon Island seascapes.	Phase I, II & III
Output 3.3: Degraded coral reefs restored in Bar Reef, Kayankerni and Pigeon Island seascapes with private sector partnerships and upscaled into other similar seascapes.	
Activity 3.3.1: Design and implementation of practical restoration plans, based on robust business models for coral reef restoration and maintenance appropriate for each priority seascape with inputs from the CPBSF.	Phase I & II
Activity 3.3.2: Building the capacity of CCGs and local communities in each priority seascape on coral restoration and monitoring with the involvement of seascape-specific FEMA sub-committee and using best practices in citizen sciences.	Phase I & II

Activity 3.3.3: Adoption of similar restoration and monitoring plans, and their implementation with capacity-built CCGs in other coral associated seascapes such as Silavatturai-Arippu-Vankalai coral reef cluster, Vidattaltivu Nature Reserve and Hikkaduwa Marine National Park.	Phase II & III

Outcome 1: Strengthened protection of coral associated priority seascapes in Sri Lanka.

Output 1.1: Three co-management plans are operationalized at Bar Reef, Kayankerni and Pigeon Island seascapes.

Activity 1.1.1: Preparation and implementation of youth and gender-inclusive co-management plans through establishing Co-Management Committees (CMCs) for each priority seascape and demarcation of management zone boundaries including Locally Managed Marine Areas (LMMAs).

Findings of studies conducted during the programme preparation, threat analysis and the synergies identified in the review of existing management plans pertaining to each priority seascape will be used in developing the first seascape level co-management plans in Sri Lanka. Limited management effectiveness in MPAs is partly due to Department of Wildlife Conservation's (DWC's) inability to enforce its laws in marine sites as effectively as in terrestrial areas, where co-management is a solution to get many other partners engaged in management. However, the Fauna and Flora Protection Act (FFPA) does not promote co-management. Therefore, under the provisions of the Coast Conservation and Coastal Resources Management Act (CC&CRMA) large seascapes encompassing MPAs will be identified and declared as Special management Areas (SMAs) under Coastal Zone and Coastal Resource Management Plan (CZ&CRMP) 2024. The CZ&CRMP is currently being revised by the CC&CRMD, with IUCN Sri Lanka as a partnering agency, while the above process has already been discussed with CC&CRMD at the National Advisory Committee (NAC) meetings of the SLCRI. Co-management planning process will be led by CC&CRMD with the engagement of all stakeholders. These co-management plans will have MPAs and LMMAs within the large seascape with different agencies taking the lead in management according to the Co-management plan principles. A stakeholder workshop to revise the CZ&CRMP was held on 28th July 2023 by the CC&CRMD with technical facilitation by the IUCN SL, where the above proposal was well accepted, and the revised plan for the next five years will start its implementation in 2024. Therefore, the risk of not getting SLCRI's priority seascapes declared as SMAs is almost zero at the time of this proposal submission.

Features of seascape co-management plans: *Each seascape co-management plan will explicitly include a revenue generation component for financial sustainability. While further studies will add more details into revenue generation, discussed under the solutions proposed in SLCRI. These seascape co-management plans will have a gender-inclusive strategy integrated within them and validated through a seascape specific stakeholder workshop. Activities pertaining to the existing MPAs within each seascape such as preparation of display boards for MPAs and LMMAs, development of educational centres, preparation of educational material (both printed and electronic) for visitors and resource users including do's and don'ts for each site, production of educational video documentaries for visitors and resource users will also be included in co-management plans in order to mobilize the community to work together with law enforcement authorities on achieving common goals in the seascape. Reef-based educational programs for schools in those areas and mobile apps for information sharing in each site will also be considered here. Lead agency for respective Co-management Committee will be identified based on the role they play and*

through consensus among all stakeholders. Accordingly, consultation during the programme preparation suggests the CC&CRMD to lead the Bar Reef seascape co-management plan, DWC to lead the Pigeon Island seascape co-management plan and the Department of Fisheries and Aquatic Resources (DFAR) to lead the Kayankerni seascape co-management plan. The committee will have all stakeholders represented in it including public, private and the people, especially those have either positive or negative impact on the ecological integrity of the seascape.

Activity 1.1.2 Establishment of a sub-committee of the national Forum for Ecosystem Management and Advocacy (FEMA) for each seascape and building its capacity.

The Forum for Ecosystem Management and Advocacy (FEMA) will be established under the GEF-funded 'Natural Capital Values of Coastal and Marine Ecosystems in Sri Lanka Integrated into Sustainable Development Planning' project, implemented by the MoE as the Government Executing Agency, for which IUCN is the GEF Agency. This project is expected to provide guidance for the SLCRI at national level, through establishment of seascape-specific sub-committees within the FEMA and conducting 'Training of Trainers' programs for members of those sub-committees in effective implementation of SLCRI in each priority seascape. Members of FEMA will be from various disciplines and from various organisations and seascape-specific FEMA sub-committees are to be appointed including FEMA members with particular interest on each of the priority seascapes, to guide seascape level CMC*s for ground level implementation of the SLCRI. Initial discussions have already been made to get academics from local universities in FEMA to play a major role in respective sub committees. Please see Figure 4, under the section 6.1.3 (Governance and Operational Structure) for a graphic representation of how these committees relate to each other in effective implementation of the SLCRI programme.*

Activity 1.1.3: Establishing/empowering gender-inclusive Community Conservation Groups (CCGs) comprising local youth under each seascape CMC to support law enforcement authorities in (a) stopping destructive fishing practices including blast fishing, and (b) implementation of regulations to protect coral reefs and their resources.

Such CCGs have already been established in the seascape of the Gulf of Mannar in Vidattaltivu Nature Reserve and Arippu in the Mannar District and Kandakuliya in Puttalam District under the GEF-funded 'Dugong and Seagrass Conservation Project', where resource exploiters have been converted to members of CCGs. These are smaller gender-inclusive youth groups within the co-management committee, with a specific role in assisting the law enforcement agencies, particularly the DWC. The same modality will be deployed in the priority seascapes to establish gender-inclusive youth Community Conservation Groups. The CCGs will initially be funded by the GFCR, but will be supported by the CCTFs once fully operational as part of the financial sustainability strategy of the programme.

Activity 1.1.4: Conducting capacity building programs for members of CMCs, CCGs and other stakeholders with an emphasis on women and youth in each seascape

Capacity building of key stakeholders: *This activity intends to build the capacity of identified stakeholder groups on responsible resource harvesting techniques appropriate in each seascape, and development of handbooks/guidelines on responsible resource harvesting appropriate for each site through a series of training programs with support from the site-specific FEMA sub-committee, and the Coral Positive Business Support Facility (CPBSF), to be established by the SLCRI programme as detailed under Activity 2.1.2 below.*

Raising the awareness of the local community: *Awareness raising of larger communities in priority seascape will be covered using appropriate approaches, such as several discussion modules supported by posters on aspects covering watershed management, reef recovery and restoration, mangrove protection and restoration, fisheries management, alternative livelihoods, financing mechanisms and community*

development. Such programs can be conducted once a month in conjunction with the monthly fisheries' cooperative society meeting, specially targeting the off-season. In parallel to this, groups such as the exporters of reef-based products including marine aquarium species, their collectors, other stakeholders, and coastal communities along these seascapes will be made aware on the need for coral reef conservation and integrated coastal and marine resource management.

Output 1.2: CORALL Conservation Trust Funds and blended financing for coral reef conservation are established to strengthen the operationalization of three co-management plans in Bar Reef, Kayankerni and Pigeon Island seascapes

Activity 1.2.1: Legal and institutional review and a feasibility study on establishing Conservation Trust Funds (CTFs) for coral reef conservation in three priority seascapes and identification of management arrangements to enable CTF establishment.

CTF for SLCRI is named CORALL (Conservation of Reefs for All Lives and Livelihoods) Conservation Trust Fund (CCTF), which is the main financing solution for SLCRI. Three such CCTFs are intended to be established and operationalised for the three priority seascapes under the SLCRI. However, Conservation Trust Funds are not in operation at present for management of coral reefs in Sri Lanka. Therefore, this activity will build on the initial work on legal and institutional review undertaken by Environmental Foundation (Guarantee) Limited (EFL), where they have established that the privately managed CTFs are not prevented legally in Sri Lanka and found that such can be institutionalised under the Trust Ordinance No. 9 of 1917. Comprehensive legal and institutional review is expected under this component to be undertaken by EFL and inform how such needs to be established and operationalised in Sri Lanka to support the SLCRI. It is expected to identify if there are any hindrances with respect to legal and institutional aspects of establishing CTFs and managing them by NGOs, and if such are there, to provide the way to overcome such hindrances. However, extensive stakeholder consultation during the programme preparation and detailed discussions of the National Advisor Committee (NAC) confirms the feasibility of this solution, while the government partners of the SLCRI have provided the consent for CTFs to be managed by the NGOs during NAC meetings, especially due to operational hindrances for such a mechanism within the government financial regulations. The government partners, the CC&CRMD, DWC and DFAR will take the lead in co-management committees (CMCs) of the seascapes and hence they will monitor the operation of CCTFs closely. Furthermore, it is expected established guidelines for operationalising CTFs according to Conservation Finance Alliance (CFA) guidelines. Proceeds of the conservation trust funds will be used for better reef governance including better enforcement and later to provide revolving loans to divert those destructive fishers into reef friendly activities. Management arrangements to enable establishment and oprationalisation of CCTFs will be identified and required actions will be recommended by this review. Local livelihood enhancement is also intrinsically bound with these financing mechanisms and the CCTFs, as described under the Outcome 2.

Activity 1.2.2: Establishment and operationalisation of a seascape level CORALL CTF with identified management arrangements.

Establishment of conservation trust fund is the first solution proposed in SLCRI to prevent Sri Lankan coral reefs from extinction. Please see the section 4.2 on the first solution proposed in SLCRI: CORALL (Conservation of Reefs for All Life and Livelihoods) Conservation Trust Fund (CCTF) for more information on this activity. Details on the potential candidates identified to manage the Trust Funds, their target amounts to be capitalised and the mode of operation is discussed there in detail. This activity builds on the legal and institutional review by EFL described in Activity 1.2.1.

Through SLCRI, these CCTFs will be designed and managed by the credible non-governmental entity Sarvodaya at all three priority seascapes and be closely linked to CMCs. Funds will be capitalized through a combination of sources, including private sector partnerships, international grants, philanthropic donations, and government contributions, while all the revenue generating activities that happens within a particular seascape will contribute to the trust fund under the monitoring of the co-management committee. This financing will also provide for the CTFs to become revolving conservation funds when they are mature enough, and it is aimed at sustaining long-term conservation efforts. Unlike traditional funds, a revolving fund is designed to recirculate the initial capital, continually replenishing itself through the repayment or reinvestment of funds generated from its activities. As such, the funds will operate on a self-sustaining model, where the generated revenue is used to finance ongoing conservation projects and initiatives.

Activity 1.2.3: Upscaling of above modalities into other coral associated seascapes such as Hikkaduwa Marine National Park, Silavatturai-Arippu-Vankalai coral reef cluster and Vidattaltivu Nature Reserve.
Successful interventions from three seascapes will be locally promoted with operators in other reef areas including Hikkaduwa Marine National Park, Silavatturai-Arippu-Vankalai coral reef cluster and VNR. Based on their proven business cases, it is expected to disseminate among potential parties to take up as investment opportunities.

Output 1.3: Macro and replicable site level innovative financing mechanisms are explored and piloted for coral reefs and community resilience in three priority seascapes in Sri Lanka.

Activity 1.3.1: Feasibility studies on innovative financing mechanisms such as bio-credits, blue bonds, and Debt for Nature Swaps (DfNS) for each priority seascape.
There is lack of agreement and understanding on the suitability of bio-credits, blue bonds, and DfNS for Sri Lanka as innovative financing mechanisms, especially for coral reef conservation. However, there is renewed interest in these tools as government funding and grants are not forthcoming as in the past. Therefore, this activity will be furthering the initial work undertaken in the project preparatory stage on selecting appropriate innovative financing mechanisms suitable for SLCRI with feasibility studies. Biodiversity Financing Plan 2018-2024 for Sri Lanka discussed 13 possible areas under the BIOFIN initiative for financing conservation of biodiversity in Sri Lanka. It is expected to assess the feasibility of using listed financing mechanisms in this activity together with other possible areas like bioprospecting, and payment for ecosystem services (PES) to be used in SLCRI, together with FEMA, CPBSF, and local and international environmental economists, under the leadership of IUCN. Feasibility study will help us establish the most appropriate financing mechanisms that can be piloted in the three seascapes during the second and third Phases of SLCRI. Discussions with Sri Lankan environmental economists based in IIED and Portland State University have expressed their interest to give their expertise in this activity. Among candidate innovative financing mechanisms biodiversity credits have found much interest among the corporates in Sri Lanka led by the BSL. Since the GFCR programme in Maldives is also conducting an assessment on bio-credits, SLCRI will learn from the Maldives programme through the Regional Cooperation Mechanism to be established between Maldives and Sri Lanka under the Output 2.2 of the SLCRI. Hence, the initial activities of the SLCRI, beyond the feasibility study, will focus mainly on the bio-credits as elaborated under the Solution 3. Other mechanisms such as Blue Bonds and DfNS may be explored during the later phases of the programme.

Activity 1.3.2: Adoption and piloting of at least one innovative financing mechanism for coral reefs and community resilience in Bar Reef, Kayankerni and Pigeon Island seascapes.

Based on the feasibility undertaken in activity 1.3.1, the most appropriate mechanism per seascape will be identified during Phase I of the SLCRI, of which implementation can start from the Phase II onwards. Bio-credits is a potential solution to field tested as there is already expressed interest by BSL to bring interested private sector partners to contribute towards piloting this in the Kayankerni Sanctuary and Seascape. Similarly, other priority solutions/mechanisms will be field tested under this activity with the most appropriate stakeholders. Based on the lessons learned in the Phase I of the SLCRI on each solution, with required modifications the proposals will be presented to the National Steering Committee for the SLCRI for selecting appropriate innovative financing mechanisms for three seascapes to be implemented in the Phase II and beyond.

Output 1.4: A mechanism for measuring management effectiveness established in three priority seascapes in Sri Lanka

Activity 1.4.1: Building the capacity of CMCs and CCGs to adopt the management effectiveness tracking tool (METT) in each seascape.

This activity will be conducted through the FEMA and CMCs at each seascape, and the tools adopted by other countries for similar scenarios will also be studied when adopting the METT. OCPP has already started capacity building on METT in Sri Lanka and undertaken preliminary assessments together with DWC. SLCRI will build on what has been done on METT in Sri Lanka and take things forward. Further, the SLCRI can bring IUCN green listing and NbS criteria and to further revise and improve management effectiveness of coral conservation in in three priority seascapes. Further the SLCRI will implement its own Monitoring and Evaluation activities to support adaptive and corrective actions, where key bio-physical and socio-economic indicators will be monitored in priority seascapes to evaluate the programme performance, youth & gender inclusiveness and environmental and social safeguards, as well as innovative and blended financing contributions. Furthermore, the programme will take extra effort in documentation of lessons learned and adaptation of sustainability approaches. CMCs and CCGs established in each priority seascapes will be provided with sufficient training to be facilitators of management effectiveness tracking using the METT. The SLCRI will work with OCPP and DWC to conduct the first METT assessments for the three priority seascapes in early 2024, which will provide the baselines for future monitoring and hands-on experience that will be instrumental for the training programmes.

Outcome 2: Transformed livelihoods of coral reef-dependent communities through coral–positive entrepreneurships with enhanced recovery from shocks in coral associated priority seascapes in Sri Lanka.

Output 2.1: Reef positive livelihoods and business opportunities are implemented at Bar Reef, Kayankerni and Pigeon Island seascapes.

Activity 2.1.1: Conducting feasibility studies on coral friendly livelihoods and women's and youth involvement in coral reef related enterprises, to identify gaps and development potentials and propose recommendations.

This activity will focus more on the women's involvement in coral reef related livelihoods, to further study and identify gaps and development potentials women has in coral friendly business opportunities in the three priority seascapes. This will also identify, strengthen, or develop women-led community groups in the priority seascapes. Value addition and provision of required technologies to reef positive fishery related products/livelihoods such as finfish, spiny lobsters, sea cucumber, chanks and high-quality dried fish are some of the identified revenue streams in sustainable fisheries. Identification and promotion of alternative

livelihoods to decrease the fishing pressure on coral reefs such nature-based tourism, sustainable aquaculture, and handicraft production, as appropriate in each seascape will also be considered here. Feasibility studies would also be required to ensure that the programme deliverables are accessible to women considering location, timing, transportation constraints, household responsibilities, permission from male family members, and access to IT facilities such as computers, phones, and internet, etc., as they may affect their ability to attend/participate in project activities. Unemployment among young women is high in almost all three prioritized seascapes. Their involvement in eco-friendly handicraft production such as carrying bags, hats and waste bins using local materials can contribute to minimize the use of plastic usage of the landing sites and the beaches. In addition, Palmyra products and garments are other potential enterprises for coral reef-dependent communities. The possibility of linking such entrepreneurs with tourist hotels in seascapes is to be investigated. Opening net cleaning centres for women in fish landing sites may reduce the work stress for fishermen, also providing women with an additional income.

Activity 2.1.2: Establishment of a Coral Positive Business Support Facility (CPBSF) to provide necessary support on different livelihood opportunities and business development for coral-dependent communities in three priority seascapes.

Coral Positive Business Support Facility: *Establishment and management of the CPBSF is key for SLCRI to identify appropriate blended financing solutions for three priority seascapes. It will be established as a unit within IUCN SL comprising of full-time and part-time experts in the field of investing in nature (as explained in its ToR). They will come up with feasible/bankable investment proposals for others to take up. With coordination support from CMCs, the PMU will implement this activity through the technical assistance and guidance from CPBSF, and necessary support through the seascape-specific FEMA sub committees. Blended financing solutions will be provided with seed funding from GFCR grant, while the sustainability mechanisms are to be established along with its operation within the first two years.*

Please see the section 4.3 on the second solution proposed in SLCRI: Coral Positive Business Support Facility (CPBSF) for more information on the business pipeline and investments identified for the CPBSF and how coral positive business will be supported along the Phases I, II and III of the SLCRI programme.

Activity 2.1.3: Implementation of coral friendly business and reef related enterprises under the guidance of the CPBSF, enhancing livelihoods of coral-dependent communities in three priority seascapes.

SLCRI intends to initiate this activity within the phase I with opportunities for quick returns, while more organised interventions are to be initiated once the environment for such initiatives are enabled through the implementation of the first phase of the programme. There will also be a steep learning component over the phase I of the programme. Coral friendly business ventures uniquely identified for each priority seascape will be implemented with the involvement of co-management committee, and the seascape-specific FEMA subcommittee under the technical guidance of CPBSF. While sustainable fisheries, sustainable tourism, sustainable aquaculture, and other coral-friendly businesses including reef cleaning and restoration-based business opportunities, waste management, and clean energy related businesses will be promoted, more details on revenue streams can be obtained from section 4.3 under the Solution 2. This activity also includes an essential training component on coral–positive entrepreneurships and selected cottage industries, such as training for youth and women in guest houses, homestays and hotel industry for various job opportunities. Additional business modalities will be developed based on seascape specific feasibility studies on coral friendly business and reef related enterprises under the technical support from the CPBSF.

Output 2.2: Regional Cooperation Mechanism (RCM) established to promote coral friendly businesses and share best practices between Sri Lanka and Maldives

Activity 2.2.1: Identification of stakeholders for the RCM, its establishment and coordination through the CPBSF.

The SLCRI will work closely with the GFCR in connecting with the UNDP Maldives programme and to identify potential stakeholders for the development of the RCM. Establishing this bilateral cooperation between UNDP Maldives and IUCN Sri Lanka is intended to deliver much leverage in sustainable financing of coral friendly businesses and share lessons learned on the development of financial mechanisms. The synergy of collaboration between the two GFCR programmes would make a win-win situation for both countries.

Activity 2.2.2: Assessment of best practices for coral-friendly tourism in Maldives and identification of learning opportunities for Sri Lanka.

Despite the differences between Maldives and Sri Lanka in terms of the status and extent of coral reefs, threats and management challenges, attempts will be made to learn from Maldives in better management of reefs by diverting pressures on coral reefs by tourism. The Maldives' review of best practices for coral-friendly tourism includes successful programs such as ethical snorkeling and diving methods, environmentally friendly infrastructure construction, and efficient waste management techniques. These procedures have been shown to reduce harmful effects on coral reefs while giving visitors entertaining and educational experiences. Drawing on the experiences and learning from the Maldives, with identified areas for improvement, such as adopting tourist rules, creating marine protected areas for tourism, implementing sustainable tourism certifications, development of biodiversity credits, and encouraging community participation in conservation initiatives. Through this learning, Sri Lanka can improve its coral-friendly tourism practices, ensuring the long-term viability of its marine ecosystems and providing visitors with life-changing experiences.

Activity 2.2.3: Implementation of appropriate nature-based tourism and/or eco-tourism ventures uniquely identified for each priority seascape with staff exchange programs, training, and collaborative tourism ventures through the RCM.

There are number of Sri Lankan companies such as Aitken Spence, John Keels and Cinnamon Hotels operating in Maldives and Sri Lanka. With their corporate support, and together with inputs from the CPBSF, the SLCRI programme intends to launch staff exchange in the hospitality industry to share and learn lessons and best-practices from each other for promotion of reef- positive tourism in Sri Lanka. It is also intended to look for collaborative tourism ventures between two countries, contributing to promoting reef positive tourism ethics in three priority seascapes.

Output 2.3: Enhanced recovery of coral reef-dependent communities from major shocks in coral associated priority seascapes in Sri Lanka

Activity 2.3.1: Disaster risk reduction mechanism established in each priority seascape to enhance the preparedness and response to natural hazards on communities.

This activity intends for the establishment of a financial disaster risk reduction mechanism to enhance preparedness and response to major shocks on businesses and communities in each priority seascape, linked to the existing disaster management framework in Sri Lanka. A financial disaster risk reduction mechanism to help recovery after shocks will be planned, through a study on the vulnerabilities reef-dependent communities face when businesses are affected by major shocks. The activity is to be initiated

with GFCR funding in each seascape, and to be continued through government budget and sustainable financing mechanisms thereafter. Financing from government budget could be considered under government welfare benefits established under the Welfare Benefits Board. Linking these communities with the existing government disaster risk reduction mechanism will also be facilitated through the relevant Divisional Secretariats during the first phase of the programme, as the existing mechanisms are not yet been extended beyond large scale acute natural disasters such as floods, hurricanes, or landslides. Sustainable financing mechanisms that could support disaster risk reduction include mechanisms such as alternative temporary employments, parametric disaster insurance, and 'Blue' stimulus packages. Feasibility of linking this facility to the seascape specific CCTF will also be explored, together with developing operating guidelines for such a programme if feasible.

Activity 2.3.2: Social safety net systems established for reef dependent communities and mechanisms developed to mobilize financial support to reef-first SMEs impacted by shocks.

Site-specific plans for impact mitigation from major shocks (bleaching events, health crises, supply chain disruptions, etc.) are to be developed through risk and opportunity mapping and studying on past experiences of reef-dependent communities and businesses, when reefs were affected by large-scale bleaching events (e.g., 1998, 2016). This would include the establishment of a community-driven financial support system to buffer financial shocks, accommodating reef-related shocks into existing social welfare/relief modalities of the state. The current modality of assisting communities is mostly based on terrestrial systems such as farmers who are affected by floods or droughts are given compensation. The concept of disaster/shock affected reef-dependent livelihoods are not well understood and captured in such systems. Therefore, it is expected to make this linkage more visible and considered in national system of compensation. Further, it is intended to make additional contributions to support affected low-income communities / SMEs through the CCTF. Reef conservation trust fund is also expected to contribute to a social welfare programme combined with national safety nets like 'Samurdhi'. Sri Lanka has several social welfare programmes, widest distributed and the largest of all being 'Samurdhi' covering approximately 30% of the population. These are also poorly targeted subsidies as social safety nets in Sri Lanka. Amongst some of the other targeted welfare systems, the ad hoc assistance in the aftermath of disasters provided by the Ministry of Disaster Management doesn't cover vulnerability of poor people dependent on reef associated ecosystems. Therefore, SLCRI suggests initiating a social welfare system as a safety net for shocks arising from reef associated disasters for the low income earning communities. This can be a contributory fund where people make contributions when they operate normally to benefit in crisis situations. These will be established at seascape level linked to existing disaster relief mechanisms.

Activity 2.3.3: Upscaling above mechanisms into other coral associated seascapes such as Hikkaduwa Marine National Park, Silavatturai-Arippu-Vankalai coral reef cluster and Vidattaltivu Nature Reserve.

Based on the demonstrated results from incorporating reef-based disaster response into Divisional level existing disaster risk reduction mechanisms and enhanced social safety networks to deal with shocks will be disseminated as best practices towards phases II and III to upscale in remining coral reef associated seascapes identified in the SLCRI. Exchange programmes will be supported by SLCRI to share knowledge by communities from pilot sites to counterpart communities in receiving sites and through officials of related institutions.

Outcome 3: Improved research and development capabilities in coral reef restoration in Sri Lanka.

Output 3.1: Conditions for scientific coral reef restoration enabled in Sri Lanka

Activity 3.1.1: Development of a National Policy Frameworks and Strategic Guidelines for Coral Restoration in Sri Lanka.

At present coral reef restoration is taking place in the country without any scientific guidelines or supervision by any authority. As all species of hard and soft corals in Sri Lanka are protected under the Fauna and Flora Protection Act (FFPA) of the DWC, even their restoration should be conducted under the permission and supervision of the DWC. The current methods of ad-hoc coral restoration include using concrete structures (reef balls) and planting coral pieces on them. There is no prior determination of suitability of the sites and environmental quality. As a result, almost all attempts of coral restoration have not yielded the expected outcomes. Hence there is need to form an oversight mechanism on coral restoration activities at least within the priority seascapes, consisting of the relevant authorities and members of site-specific CMCs/CCGs. SLRCI will initiate the process to form such a mechanism and furthermore, to develop National Policy Frameworks that will include guidelines and best practices and a monitoring group for coral reef ecosystem restoration. As feasibility studies are to be conducted under the output 3.2 below, once they are done, the SLCRI will hold a national conference on coral reef restoration, where experience from multiple parties will be shared and an action plan for nation-wide coral reef restoration will be drawn in line with the National Policy and Strategic Guidelines. The national policy framework will form a national committee on coral reef restoration under the DWC and determine the way forward to eliminate ad-hoc approaches.

Output 3.2: Restoration technologies developed and piloted in coral associated seascapes in Sri Lanka.

Activity 3.2.1: Feasibility studies on appropriate coral restoration technologies for each priority seascape.

While cement reef balls and iron structures have been used for planting coral pieces in Sri Lanka reef restoration programmes are being supported by Tokyo Cement and INSEE and some private banks. Tokyo Cement and INSEE are two main cement production companies of Sri Lanka, who use limestone which have predominately been made of fossilised coral. Therefore, both companies support coral restoration as a part of their CSR programme. Some of the private banks in Sri Lanka such as the HSBC are interested in investing in nature conservation as part of their CSR projects including coral reef conservation and restoration. In addition to information documented during the programme development stage, further feasibility studies will be conducted on reef restoration during the initial stages of phase 1 of the programme. These studies will strengthen the existing knowledge on suitable locations for restoration, availability of coral fragments for restoration, suitability of artificial structures, success rates of previous restoration attempts, and cost benefit analysis based on the scale of restoration, etc. focusing on the three priority seascapes.

Activity 3.2.2: Adoption and piloting of (a) appropriate strategies for implementation of recommended reef restoration techniques, and (b) novel techniques in coral restoration including coral propagation in Bar Reef, Kayankerni and Pigeon Island seascapes.

Implementation of recommended reef restoration: *Guidelines developed within the first year of the phase I of the SLCRI will be adopted in each priority seascape from the second year onwards with the involvement of CMCs for each seascape and with the active participation of CCGs.*

High-tech coral restoration laboratory: *Presently Sri Lanka does not have a high-tech laboratory facility to carryout ex-situ coral propagation. However, there are some private aquariums that import and re-*

export corals with the required approvals from the Government. These approvals allow them to import coral species that are not present in Sri Lanka. Presently they practice vegetative propagation of imported corals from companies that supply the aquarium trade. The SLCRI will involve these private companies in ex-situ coral propagation with the relevant Government approvals to utilise their facilities to culture corals naturally occurring in Sri Lanka for reef restoration. This can also be coupled with tourism and as an economic venture. These activities will be initiated during the 2nd phase of the programme and continued throughout the 3rd phase and beyond. SLCRI will engage with the reputed organisations such as the Australian Institute of Marine Science, University of Singapore, Geo Informatic Centre of Asian Institute of Technology (GIC-AIT), etc. and link them with national institutes/laboratories such as the Engineering and Marine Faculties of the Universities of Moratuwa and Ruhuna in Sri Lanka, and the Sri Lanka Institute of Nanotechnology (SLINTEC). Furthermore, various tools developed through artificial intelligence for coral reef monitoring as well as other International best practices, such as the IUCN experience of Huawei TECH4ALL programme, and IUCN Green List standards will also be used in adoption of novel techniques in coral restoration.

Output 3.3: Degraded coral reefs restored in Bar Reef, Kayankerni and Pigeon Island seascapes with private sector partnerships and upscaled into other similar seascapes.

Activity 3.3.1: Design and implementation of a practical restoration plan, based on robust business models for coral reef restoration and maintenance appropriate for each priority seascape with inputs from the CPBSF.

The SLCRI intends to make the paradigm shift from ad-hoc coral planting programmes to more organised and scientific reef restoration programme in Sri Lanka, by pilot implementation of a sustained coral reef restoration and monitoring programs coupled with eco-tourism in each priority seascape. With a view to obtain regular monitoring of coral reefs under supervision from the Forum for Ecosystem Management and Advocacy (FEMA), members of local CCG will be trained in monitoring bio-physical parameters of coral reefs, also using a citizen science programme participated by the visitors to the area and the local community. Further studies on stock assessments on ecologically important coral species and reef fish (including keystone species) that are under threat due to harvesting can also be led by those CCG members, through the citizen science programme. This activity may also include further research on carrying capacities on fishing and other human activities including tourism in priority seascapes. These data from MPAs, LMMAs and the larger seascapes can contribute to ecosystem Red Listing and species Red Listing for marine biota. Further, the programme will design a certification system for trained individuals, especially from the local youth on restoration and monitoring of coral reefs. These restoration plans will be implemented in each priority seascape under the monitoring of the co-management committee, coupled with nature-based/eco-tourism interventions. CCGs and other stakeholders such as tourist dive centres will be employed in coral reef restoration together with Universities, NGOs, and corporate partners under the supervision of CMCs. For example, the BSL will convene a group of interested corporate partners to provide private sector investment to support the DWC's capacity for enforcement and conservation of landscape, so that the revenue streams are made sustainable. Private sector partners are to be identified for research and restoration-based tourism ventures in Kayankerni and Pigeon Island seascapes in partnership with the BRT and CSF.

Activity 3.3.2: Building the capacity of CCGs and local communities in each priority seascape on coral restoration and monitoring with the involvement of seascape-specific FEMA sub-committee and using best practices in citizen sciences.

Capacity building of CCG members on coral reef restoration methodologies and best practices with the support of the FEMA sub-committee for each area. Trained youth representing the local CCG will take the

lead role in reef health monitoring, mobilising, and popularising a citizen science programme in each priority seascape with the support from seascape-specific FEMA sub-committee.

Activity 3.3.3 Adoption of similar restoration and monitoring plans, and their implementation with capacity-built CCGs in other coral associated seascapes such as Silavatturai-Arippu-Vankalai coral reef cluster, Vidattaltivu Nature Reserve and Hikkaduwa Marine National Park.

The trained CCG members will be engaged in restoration work on coral reefs in the other coral reef areas including the HNP, VNR and Silavatturai-Arippu-Vankalai coral reef cluster in the Gulf of Mannar.

3 Priority Implementation Sites

**Please see Annex 1 for maps and more details on the priority seascapes of SLCRI, together with the list of references.*

3.1 Bar Reef Sanctuary and Seascape

Introduction

The Bar Reef Seascape, which encompasses an area of 1,194 km^2, is in and off the Puttalam District in the Northwestern Province. The Bar Reef Sanctuary covers an area of 306.7 km^2. The Bar Reef seascape includes part of the Puttalam Lagoon, the adjacent marine area, including the northern section of the Kalpitiya Peninsula (see Figure A1 of Annex 1). The northern boundary of the seascape is the border between Puttalam and Mannar Districts while the southern boundary is at the Mi Oya outfall within the Puttalam Lagoon. The western boundary of the seascape is located directly west of the above-mentioned points between Puttalam and Mannar Districts and immediately west of the western boundary of BRS, along the continental slope approximately at 50 m depth. This seascape includes coral reefs, sandstone reefs and seagrass meadows in the ocean and extensive seagrass meadows and mangroves in the Puttalam Lagoon. The coastal stretch in the northwest contains varied marine habitats that are rich in biodiversity. This setting is unique in Sri Lanka where all the sensitive marine ecosystems occur. The Bar Reef was one of the best shallow water coral reefs in Sri Lanka (Dayaratne et al., 1997) until the 1998 bleaching event which devastated the shallow coral areas (Rajasuriya and Karunarathna, 2000; Wilkinson, 2000). The Bar Reef was declared as a sanctuary under the Fauna and Flora Protection Act in 1992. A Special Area Management Plan was prepared for the BRS under the CRMP project of the CC&CRMD (CCD, 2005). An Environmentally Sensitive Areas (ESA) project under the Ministry of Mahaweli Development and Environment prepared a new management plan (MMD&E, 2018). More recently an EU funded project COLIBRI was implemented by EFL, and a management plan has been prepared. The Bar Reef seascape will allow the private sector in the blended finance arrangement to develop businesses related to nature-based tourism and sustainable aquaculture to diversify livelihoods to reduce the pressure on the coral reef ecosystem of the Bar Reef Sanctuary and other reefs within the seascape.

Status of the coral reef habitats

The early scientific surveys of the Bar Reef were conducted by NARA in 1989 & 1990, which led to the declaration of the BRS in 1992 by the DWC under the FFPA. Coral and sandstone/limestone reef habitats are found on Bar Reef. Shallow patch reefs of coral are found up to a depth of 10 to 12 meters. The sandstone/limestone reef habitats are in relatively deep water from about 12 meters to more than 30 meters. The live coral cover among the shallow coral banks was over 70% in mid-1990s (Dayaratne et al., 1997). Most of the live corals were lost during the 1998 coral bleaching event, however, the shallow coral areas recovered relatively well, and the live coral cover was up to 40.76% in 2004 (Rajasuriya, 2005). Another relatively major bleaching event in 2016 destroyed most of the corals that grew well after the 1998 bleaching event, resulting in low coral cover and poor fish life in shallow coral patch reefs. Two surveys were conducted in April and December 2022 on the shallow coral patches of Bar Reef and at Kandakuliya by the EFL (Kumara, 2022). The results revealed that the combined live coral cover for seven shallow patch reefs at the Bar Reef was 16% in December 2022. The reef at Kandakuliya located within the Bar Reef seascape had a live coral cover of 44% in December 2022. (Kumara, 2022). The survey confirmed that the shallow coral areas of Bar Reef are also recovering from the last major bleaching event in 2016. Corals on patch reefs in 10-to-15-meter depth range are healthy and will also serve as sources of larvae for reef recovery in the shallow coral areas. This rapid increase of live coral cover, especially at

Kandakuliya reef which is within the seascape clearly showed the resilience of the hard corals in this seascape and the recovery of the reef habitats from the last major bleaching event through coral recruitment and growth of existing coral colonies. This information corroborated with the observations of the sport diving community. These recovering sites will also serve as sources of larvae and juveniles for the recovery of the reef.

Biodiversity

Over 200 species of reef fish and 120 species of hard corals were recorded by NARA in the early 1990s (Dayaratne et al, 1997). The dominant coral species at the time belonged to the genera: *Acropora, Montipora, Echinopora, Favia, Favites, Diploastrea, Pleasiastrea, Platygyra, Leptoria, Porites*. In addition, there were many species of invertebrates belonging to 17 genera that included crustaceans, molluscs, and nudibranchs. Three species of spiny lobsters (*Panulirus versicolor, P. pencillatus, P. ornatus)* are present as well as three species of sea turtles (*Chelonia mydas, Eretmochelys imbricata* and *Lepidochelys olivacea).* Due to the varied habitats within the BRS there were 34 species of butterflyfish *(*Ohman et al, 1998*)* prior to the major coral bleaching event in 1998. Spinner dolphins *(Stenella longirostris)* frequent the western boundary of the sanctuary.

Other reefs in the seascape

In addition to the coral reefs there are extensive areas of sandstone reefs within the Bar Reef seascape. Although the live coral cover is less than the shallow coral habitats the sandstone reefs support a much higher diversity of coral species as well as fish species and other invertebrates (Ohman et al., 1997; Ohman & Rajasuriya 1998; Rajasuriya et al., 1998).

Socioeconomic status

The livelihoods of the community in Bar reefs at present is mainly based on fisheries. Fishing includes finfish, spiny lobsters, sea cucumbers and chanks. Due to the high diversity of reef fish species the Bar Reef is targeted for harvesting ornamental fish and invertebrate species. The total population in the area surrounding Bar reef is 88,207 (Resource Profile Kalpitiya, 2020). The main livelihoods of the community include fisheries, aquaculture, agriculture, poultry, livestock farming and tourism. The Kalpitiya Peninsula and the Puttalam Lagoon area have been identified for major tourism related development by the government. Whale/Dolphin watching, Kite surfing and camping and camping are the main tourism related activities (Kularatne et al., 2022). The Kalpitiya Peninsula and the environs that include the BRS has been declared as a high priority tourism development area by the Sri Lanka Tourism Development Authority (SLTDA) and the Urban Development Authority (UDA) which will increase the opportunities for setting up blended finance projects for this priority seascape.

Threats

Baseline socio-economic surveys conducted during the proposal development indicated that fishing is the main threat to the coral reefs in BRS. There are many destructive and illegal fishing methods including the use of explosives, netting on the reef areas for fish and lobsters. Purse seining in the coral areas within the sanctuary has removed most of the previously abundant fish stocks. According to the Fisheries laws in Sri Lanka, purse seining is allowed beyond 7 nautical miles from the coast. However, due to lack of management, this method is being used as close as 2 nautical miles from the coast within the sanctuary. Purse seine or ring nets which are legally banned, are still being used near the Uchchimune island by five fishermen and 25 more coming from Kalpitaiya area. In addition, killing of turtles, use of illegal gear, by catch and stranding of marine mammals due to illegal methods have been recorded. Other prohibited fishing methods include night diving to catch parrotfish that has a high export value. The misuse of scuba diving licenses for illegal fishing activities is another threat to the bar reef. However, overfishing of

parrotfish and scuba diving to collect sea cucumber and gastropods (conch) is evident although been , banned in the Gulf of Mannar area. It has also been reported that the use of kerosene to catch reef fish is getting popular among illegal fishermen. Pollution of the coastal area due to improper waste disposal is a major problem at every fish landing site and fishing debris including ALDFG are very common around the coast and around islands in the Kalpitiya Peninsula. Furthermore, there is destruction of mangroves and damage to seagrass meadows within the Puttalam Lagoon of the seascape. While unsustainable fishing remains the most prominent threat to the site, aquaculture and tourism could pose future threats, which are not currently causing any detrimental impacts on coral reefs.

Management

Although the BRS was declared in 1992, no action was taken to protect the coral reefs and their resources. The authorities lack the necessary resources and trained manpower. The SAM plan prepared by the CC&CRMD in 2005 was not implemented and thereafter the ESA project of the Ministry of Environment prepared another management plan for the year 2019 – 2023. Action was taken to protect the shallow coral area by installing marker buoys to indicate the coral area as a no fishing zone. However, the moorings of the marker buoys were not maintained and some of them have now been lost. Reef restoration using concrete pillars and reef balls has been tried on the shallow coral patches but have not been successful (pers. comm. Shanaka Perera, Kalpitiya). The DWC maintains an office at Kandakuliya which is about 20 km to the south of the Bar Reef and the main purpose is to issue tickets for whale watching. The sanctuary is within a declared FMA – Northwestern Fisheries Management Area established under the Department of Fisheries and Aquatic Resources (DFAR). Although the BRS is within an FMA, fisheries management is lacking. The DFAR lacks boats and trained personnel for offshore patrolling and as a result the FMA is not effective.

Financing Gaps

Available finances for coral reef conservation, building resilience and economic empowerment of coral-dependent communities is less than the societal needs. Therefore, mobilizing finances to bridge this gap for coral reef conservation and coral positive initiatives is necessary. In the Bar Reef Seascape, establishment of a co-management mechanism for effective law enforcement and strengthening of fisheries governance requires additional funding. Furthermore, activities such as the formation of Community Conservation Groups (CCGs), capacity building, equipment, etc. needs initial funding until the CCTF is established and providing sustainable self-financing. Harvesting ocean resources in a sustainable manner and supporting resilient ecosystems for long term productivity are important aspects for achieving a sustainable blue economy. In that context, shifting towards sustainable fishery through reef positive fishing techniques, fishing gear, fish stock management, transport and trading are important strategies. However, the lack of capital for transition to sustainable fishery is a major obstacle for the coral-dependent communities in Bar reef and other seascapes as well. Also, lack of finance for transition to alternative sustainable livelihoods/coral positive business ventures such as sustainable tourism, sustainable mariculture/aquaculture, agriculture and livestock and other self-reliance enterprises is another area where finance gaps are quite visible. In Bar Reef, financing gaps also exist for coral restoration and research, education and awareness, strengthening coastal and marine water quality monitoring, mobilizing community engagement and waste management.

3.2 Kayankerni Sanctuary and Seascape

Introduction

Kayankerni seascape is in and off the Batticaloa District between Panichankerni and Kalkuda and encompasses 789 km2 (see Figure A4 of the Annex 1). The Kayankerni coral reef is located at Thennadi Bay. The northern boundary of the seascape is at Vakare Lagoon outfall and the southern boundary is located at the Kalkudah area. The eastern boundary of the seascape is located directly east of the above-mentioned points, along the continental slope approximately at 50 m depth. The coral reef at Kayankerni was mined for lime production in the 1960s and 1970s (Salm 1979). However, this destructive activity gradually ended in the 1980s as the site became extremely popular for the collection of marine aquarium fish. The early scientific surveys of the Kayankerni reef were done in 2008 – 2009 by the National Aquatic Resources Research and Development Agency (NARA) for a study on stock assessments of marine aquarium fish for the preparation of the *Sri Lanka Fisheries Atlas, Volume 1* (Long et al., 2010). In 2011-2012 a survey was carried out by the Ocean Resources Conservation Association (ORCA) and Dilmah Conservation (Weerakkody et al., 2012). More recent surveys were conducted by the Blue Resource Trust (BRT). The KS with an area of 9.53 km^2 was declared under the Fauna and Flora Protection Act, in 2019. The sanctuary covers much of Thennadi Bay and the northern section of Vandeloos Bay situated to the south of Thennadi Bay. The Kayankerni seascape includes coral reefs, sandstone reefs and rock reefs. Small patches of seagrasses are present in the reef lagoons. In addition, the deeper areas of the seascape have many shipwrecks that serve as artificial reefs and enhance biodiversity and fishery resources. The varied habitats within the seascape have an influence on the biodiversity and health of the reef habitats. Kayankerni and the surrounding area is becoming increasingly popular for local and foreign visitors and has immense potential to develop into a significant economic center for tourism.

Status of coral reef habitats

The Kayankerni reef consists of mixed coral habitats within a depth range of 1 to 9 m. Large stands of *Echinopora lamellosa* and *Montipora aequituberculata* dominate many reef sections. Other common species belong to families of Poritidae, Faviidae and Mussidae. The reef was significantly affected during the 2016 coral bleaching event where about 60% of the corals were lost (Perera, 2019). The reef was severely bleached again during a localized bleaching event in 2019-2020, which caused a major loss of live corals (Painter et al., 2023). An invasion of algae covered the reef for a short period and recent surveys conducted by BRT/IUCN revealed that most of algae were not present and there is new coral recruitment and some table corals have already reached a diameter of about 30 cm. Surveys conducted in 2022-2023 during the preparation of this proposal revealed that the reef is recovering relatively well from the bleaching event and the live coral cover is at KS is 35.8%. (BRT/IUCN, 2023).

Biodiversity

The coral reefs of Kayankerni are highly diverse, dominant coral species in the sanctuary belonging to the families of Acroporidae, Faviidae, Poritidae, Mussidae, Merulinidae, and Pocilloporidae. A total of 51 species of hard corals, 9 species of algae, 115 species of invertebrates (crustaceans, molluscs and echinoderms) have been recorded. In addition, 206 species of reef fish including 18 species of butterflyfish (Chaetodontidae) and six (6) species of angelfish (Pomacanthidae) have also been recorded, while the families Pomacentridae (Damselfish), Acanthuridae (Surgeonfish) and Lutjanidae (Snappers) were found dominantly. Furthermore, sea turtles nest in this area (Weerakkody et al., 2012; BRT/IUCN, 2023).

Other reefs in the Kayankerni seascape

The other reef sites in the seascape include the Sallithivu Island at Panichchankerni, Passikudah and Kalkudah reefs. All of these sites were impacted by the bleaching events and the shallow corals around the headlands were severely bleached and live coral cover in the lagoons is extremely low. These reef lagoons are full of coral rubble and different species of algae, mainly *Sargassum* and *Turbinaria*. The common hard coral species on the seaward slope consists of branching and tabulate *Acropora* spp., and diverse massive corals of the families of Poritidae and Faviidae. Passikudah Bay reef had a live coral cover of 53% prior to 2010 (NECCDEP, 2010) but was bleached in 2019 – 2020. Surveys conducted in 2023 revealed that there is good coral recovery and the live coral cover at Passikudah and Kalkudah were 33.8% and 46% respectively. The reef fish abundance was relatively lower in KS compared to the PIMNP. The dominant species at KS were damselfish (Pomacentridae), surgeonfish (Acanthuridae), butterflyfish (Chaetodontidae) and Snappers (Lutjanidae) (BRT/IUCN, 2023). Seagrasses are present in the reef lagoon.

Socioeconomic status

The Kayankerni GND consists of a total of 437 households, accommodating approximately 1,347 individuals (Resource Profile - Koralaipaththu North DSD, 2022). The fishing industry and fishery-related activities serve as the primary source of livelihood for about 37% of the total population, making it the dominant economic activity in the Kayankerni area. Rice farming is the second major economic activity, while other agricultural crop farming is reported by the residents. Much of the fishing is artisanal fisheries. The Reef was popular for ornamental fish collection in the past but three decades of civil unrest in the area and a change in fishing practices have resulted in a decline of fish collection around Kayankerni. Fishery activities are organized with one fisheries cooperative society with 356 members out of which 17 women represent the society. Tourism has not been developed much in the Kayankerni and Thennadi Bay area. However, several large to medium sized hotels are present at Passikudah, in the Vandeloos Bay which is to the south of Thennadi Bay. The growth of the tourism industry in Passikudah and surrounding areas is likely to increase the economic value of the reef. The reef is however still a vital resource for local small-scale and artisanal fishermen. A relatively small number of people are involved in other types of employment such as livestock rearing, and other SMEs

Threats

The main threats to the coral reef due to anthropogenic activities include Illegal and destructive fishing using explosives that is practiced widely in the area. While this practice is mostly carried out in deeper water, it is likely that some dynamite fishing is also carried out in shallow coral areas. Pollution is also one of the major impacts in both Thennadi and Vandeloos Bays, where nutrient pollution was found to be the main issue and oil, and sewage pollution were recorded moderately, while solid waste pollution from land-based activities was also an issue. The southern end of the Kayankerni reef system, located closest to the Valachchenai lagoon mouth has a lower coral cover and a high algal cover indicating the influence of nutrients and sediments from the lagoon. Increased solid waste pollution, both from urban sources and the fisheries industry is also a major concern for both the coral reef and coastal ecosystems (Perera, 2019; BRT/IUCN 2023).

Management

The KS was declared in 2019, but there is no management of the sanctuary. Presently the management of the sanctuary is within the purview of the Assistant Director of the Wildlife Department for the Batticaloa District. There is also no fisheries management in the area. However, the two LMMAs identified north and south of the KS during the baseline surveys would provide pilot sites for community-based management in the seascape. LMMA mapping and ground demarcation will be implemented within the phase I of the SLCRI programme.

Financing Gaps

The main areas that finance gaps exist in Kayankerni are to establish co management mechanism, establish Community Conservation Groups and to develop sustainable tourism, self-reliance entrepreneurships, agriculture and livestock. Additional financing is also needed for sustainable fisheries, sustainable mariculture/aquaculture, coral restoration/research, waste management, coastal and marine water quality monitoring, and for introducing electric powered/energy efficient boats. Only having a small fishing community makes it easy to introduce sustainable fishing methods in Kayankerni, while the lack of capital financing to support such a transition and community mobilization has been an issue. Furthermore, inability to leverage finances to establish an MPA office and adequate staff as well as to support capacity building needs of the community as well as authorities are issues to be addressed.

3.3 Pigeon Island Marine National Park and Seascape

Introduction

The Pigeon Island seascape of 326 km2 includes the area from Uppuveli to Boulder Point in Kuchchaveli in and off the Trincomalee District (see Figure A7 of the Annex 1). The northern boundary of seascape is at boulder point near Kuchchaweli and and southern boundary is located at Uppaveli lagoon outfall. The eastern boundary of the seascape is located directly east of the above-mentioned pints, along the continental slope approximately at 50 m depth. Larger portion of this seascape boarded to Kuchchaveli Divisional Secretariate, and southern part of seascape boarded to Trincomalee town and Gravets Divisional Secretariate. The Pigeon Islands excluding the marine areas were first declared as a sanctuary under the FFPA in 1974 to protect the nationally endangered Wild Rock Pigeons (*Columba livia*) that roost on the islands. The PIMNP was declared in 2003. The protected area covers 4.71 km^2. The buffer zone of the PIMNP extends onto Nilaveli Beach. The main conservation objectives are to protect the nationally endangered Wild Rock Pigeons and the Coral Reefs within the PIMNP (DWC 2017). The Pigeon Island seascape includes coral and rock reefs that are important for maintaining biodiversity and health of the PIMNP and surrounding areas. The coastal stretch from Trincomalee to Kuchchaveli has been identified for high level tourism development by the government in its Strategic Tourism Development Plan of 2009.

Status of coral reef habitats

Fringing coral reefs are found around the two islands of the PIMNP. The main coral reef is located on the southwestern edge of the large Pigeon Island. The coral reef is about 200 m long and 100 m wide and has a depth range from 1 to 7 meters. Coral reefs of the PIMNP were destroyed in the early 1970s due to an invasion of the Crown-of -Thorns starfish (*Acanthaster planci*) that affected the northwestern and eastern reefs. The coral reefs eventually recovered after the physical removal of starfish by the Department of Fisheries and Aquatic Resources in the 1970's (De Bruin, 1972). Thereafter the coral reefs survived two major events: the 1998 coral bleaching event and the 2004 tsunami. Coral reefs in PIMNP were not bleached in 1998 (Rajasuriya & Karunarathna, 2000; Rajasuriya, 2005) and were undamaged during the Indian Ocean tsunami in 2004 (Rajasuriya et al, 2005). However, the PIMNP reefs were completely bleached in 2010 as well as many reefs in the Trincomalee District but recovered a few months later. Intermittent bleaching events that caused partial coral bleaching corals have been observed during the past decade, however, relatively quick recovery has also been observed. Presently the reef is dominated by branching and tabulate *Acropora* species (Perera and Kotagama, 2016). The live had coral cover was 54.4% in 2003 (Rajasuriya et al, 2005) and it has decreased to 21% in 2013 (Perera and Kotagama, 2016).

A recent survey in 2022-2023 during the preparation of this proposal revealed that the live coral cover is 46.5%, Soft coral cover (13%), Algae (4.3%) Coral rock 12.3% and Coral rubble (1%) (BRT/IUCN, 2023).

Biodiversity

Over 100 species of reef building corals and 222 species of reef fish have been identified around the PIMNP and the adjacent reef areas. In addition, three species of marine turtles have been observed in the PIMNP. The dominant fish species belonged to Pomacentridae (Damselfish), Chaetodontidae (Butterflyfish) and Acanthuridae (Surgeonfish (BRT/IUCN, 2023). The Critically Endangered Hawksbill turtle (*Eretmochelys imbricata*), Endangered Green turtle (*Chelonia mydas*) and Vulnerable Olive Ridley turtle *(Lepidochelys olivacea*) have been found among the coral habitats. All three species are considered nationally endangered (MOE, 2012). The coral reef of the large Pigeon Island is home to a small group of blacktip reef sharks (*Carcharhinus melanopterus*) listed under the Vulnerable category in the IUCN Red List of Threatened Species. PIMNP is one of the last refuges for the blacktip reef sharks that have become rare on many shallow reefs in Sri Lanka due to overfishing. In addition, the coral reefs support many species of invertebrates including crustaceans, molluscs, and echinoderms.

Other reefs in the Pigeon Island seascape

The Trincomalee District has many fringing coral reefs along the coast and rock reefs that have been colonized by reef building corals and soft corals. Several reef sites were examined in 2023 within the seascape; they include the Coral Island located to the north of the PIMNP and popular dive sites (white rock, and Knife Rock) in the vicinity of the PIMNP and several locations along the coast between Uppuveli and Kuchchaveli. Live coral cover at Coral Island was 58% in 2003 (Rajasuriya, 2005) and it has increased to 72.8% in 2023 (BRT/IUCN, 2023) indicating a resilient healthy coral reef. The coral reef at Pirate's Cove at Kuchchaveli had 69% live coral cover. Corals at both locations were dominated by *Acropora* spp., *Montipora* spp., and *Echinopora* spp. Coral communities at White Rock and Knife Rock have more coral diversity and a live coral cover of 33% (BRT/IUCN, 2023). Fish assemblages varied among these sites based on the substrate type and reef structure between sites outside PIMNP. The average number of butterflyfish per belt transect (250 m^2) were 21 and 23 individuals at Pigeon Island and Coral Island respectively. An average of 36 individual butterflyfish were recorded at Pirates cove reef in Kuchchaveli (BRT/IUCN, 2023)

Socioeconomic status

When Pigeon Island seascape is considered, two fisheries cooperatives operate in the Nilaweli Grama Niladhari Division (GND), with more than 500 households with 3,703 active fishermen/women. Fishing was the traditional form of livelihood of the coastal communities in Trincomalee District. With the development of tourism in the late 1980's a coastal stretch of about 20 km north of Trincomalee town has many large and small hotels and guest houses. In addition, there are several scuba diving establishments as well as SMEs catering to tourism. Pigeon Island is one of the main attractions in Trincomalee District for both local and foreign visitors. The main economic activities of the coastal communities at present include both tourism and fishing. With the ending of the civil war in 2009, the tourist influx to Pigeon Island has increased several folds (DWC, 2017). There were 35,204 visitors to the PIMNP in 2011 and the number has increased to 44,925 and 51,864 in 2012 and 2013 respectively. Within a period of 40 months (May 2011 to Sep 2014) there were 146,375 tourists. In August 2014 alone there had been 14,368 visitors. In 2013 the park earned a revenue of around USD 54,250.00 which was a higher income per hectare of protected area (about USD 120 ha-1) than any of the terrestrial parks (Perera and Kotagama, 2016). It has also resulted in an increase in user conflicts. The management plan indicates that if the reef and the environment degrade due to inadequate management and reduction of biodiversity the local economies will be negatively affected as tourists will no longer visit the PIMNP (DWC, 2017).

Threats

Major threats to coral reefs in Trincomalee District are blast fishing, use of banned fishing gear such as bottom-set nets, uncontrolled resource exploitation, urban pollution, boat anchoring and visitor pressure (Rajasuriya et al, 2005; Perera and Kotagama, 2016). The major threats on PIMNP are reef walking by visitors, pollution, chronic oil pollution from boats, entanglement of fishing nets, damage by boat anchoring (DWC, 2017). Gill nets laid in nearby areas outside the PIMNP sometimes get entangled on the coral reefs due to nets being dragged onto the coral reef by strong currents. Blast fishing in the adjacent reefs outside the PIMNP is a major threat to fish stocks and biodiversity of the coral reefs (Rajasuriya et al, 2005).

Management

The PIMNP is managed by the Department of Wildlife Conservation (DWC). DWC maintains a dedicated staff to look after Pigeon Island. There is no fishing within the protected area although there is destructive fishing outside the protected area. The management plan of 2017 has several strategies including mitigating harmful activities to the coral reefs, reducing visitor pressure, proper operations of the boats taking visitors to the island, proper waste disposal, improving infrastructure for the park office, capacity building for the DWC staff, enhance research and periodic removal of coral predators such as invasive crown-of-thorns starfish. The present management arrangements have reduced reef trampling and boat anchoring on the sensitive coral reef area adjacent to the main Pigeon Island. The Pigeon Island management plan by the DWC in 2017 has been prepared for a period of 5 years. Hence there is a need to review and revise the management plan. Although the DWC manages the PIMNP, the larger seascape outside the MPA has no management and fisheries is the main cause of reef degradation. Fisheries management is lacking and therefore there is dynamite fishing and laying nets on reefs within the seascape. The programme will address these issues to reduce and eliminate drivers of degradation outside the PIMNP, while working with the DWC to further improve management actions within the PIMNP.

Moreover, it is crucial to promote alternative sources of income that alleviate stress on the reefs through the collaboration of both governmental and non-governmental entities. Engaging in public-private partnerships (PPPs) becomes imperative for ensuring sustainable reef management. Encouraging sustainable aquacultural practices, promoting eco-friendly handicraft industries, and providing training and support for entrepreneurship in non-fishery sectors can offer viable alternatives for local communities. These initiatives can help alleviate unemployment, reduce the strain on marine resources, and contribute to the overall well-being of the adjacent communities. Collaborative efforts involving local communities, government agencies, conservation organizations, and the tourism industry are crucial for implementing and monitoring these solutions. By addressing the socioeconomic drivers of reef degradation and fostering sustainable livelihoods, the coral reefs of Pigeon Island can be preserved for future generations while supporting the well-being of the people who depend on them. Addressing these complex challenges requires careful consideration of strategic initiatives and potential alternative solutions. Within the fishing sector, measures such as introducing harvesting and carrying capacities, promoting sustainable fishing practices, enacting stricter regulations to curb destructive techniques, and reinforcing the protection of marine reserves can play a pivotal role in safeguarding both fish populations and the health of reef ecosystems. With respect to tourism sector, a comprehensive approach involves enforcing responsible tourism guidelines, employing continuous monitoring and evaluation to identify sensitive areas, and harnessing the awareness of the visitors about the paramount significance of reef preservation. Furthermore, the team proposes the development of a user-friendly mobile app designed to educate and guide individuals in utilizing the reef sustainably. This application would provide essential

insights into keystone species, their value, as well as dos and don'ts, enhancing the understanding and responsible utilization of this delicate ecosystem. The biggest threat to the reef in this area is the destructive use of dynamite for fishing. In that context, after talking to dynamite fishermen from various families, it turns out they'd be willing to change their livelihoods if they can earn sufficient profits.

Financing Gaps

Similar to other two seascapes, gaps of funding at the PIMNP are mainly for financing the establishment of co-management mechanism, to form Community Conservation Groups, and to strengthen fisheries law enforcement. In addition, capital is needed to finance reef positive alternative livelihoods such as sustainable tourism, and sustainable self-reliance entrepreneurships. There is also a demand for additional financing for shifting towards sustainable fisheries through the variety of reef positive solutions, to finance electric powered/energy efficient boats, sustainable mariculture/aquaculture, improve waste management, coral restoration /research, agriculture, and livestock, and to mobilize communities through a participatory and holistic approach. Due to finance gaps communities in Pigeon Island seascape has not been well mobilised causing a considerable gap in communication and understanding between communities, private sector and the Government authorities that needs to be addressed.

4 Programme Solutions

4.1 Summary Table of Proposed GFCR Interventions

Table 2: Summary of Programme Solutions

Number and name of Solution	Sector	Location Implemented	Driver(s) of Coral Reef Degradation Addressed	Linked Programme Outputs	GFCR Grant Request (USD)	Readiness stage	Implementing Partners
1. CORALL[20] Conservation Trust Funds (CCTFs) established for effective co-management of coral reefs in three seascapes	• *Marine Protected Areas* • *Sustainable fisheries* • *Coral ecosystem restoration* • *Ecotourism* • *Invasive Alien Species management* • *Sustainable mariculture/aquaculture*	*All three priority seascapes and possible expansion into other potential sites studied during the programme preparation*	*Over harvesting of reef associated resources, use of blast fishing and other destructive fishing methods, and pollution of reef environment are addressed through co-management mechanism with sufficient resources channelled for removing barriers for effective management of coral reefs*	***Output 1.1*** *Three co-management plans are operationalized at Bar Reef, Kayankerni and Pigeon Island seascapes.* ***Output 1.2*** *CORALL Conservation Trust Funds and blended financing for coral reef conservation are established to strengthen the operationalization of three co-management plans in Bar Reef, Kayankerni and Pigeon Island seascapes.*	**TOTAL:** *2,500,000* **Phase I:** *480,250* **Grant co-financing:** *4,000,000*	*Design and incubation stage.*	*DWC, CC&CRMD, DFAR, FD, NARA, MEPA, NAQDA, SLTDA, SLCG, FCCISL, MoE, MoW&FRC, MFARD, MoF, Local Government, Fisheries Cooperative Societies, Other CBOs, BSL, Hoteliers, Other Tourism Service Providers, Other Private Sector Companies, Media.* *NGOs including Sarvodaya, BRT, EFL, ORCA, NAFSO, LEF.*
2. Coral Positive Business Support Facility (CPBSF) to design and promote reef-	• *Sustainable livelihoods mechanisms,* • *Ecotourism,* • *Sustainable fisheries,* • *Sustainable mariculture/aquaculture,*	*All three priority seascapes and possible expansion into other potential sites studied during the*	*Destructive fishing, overfishing, wastewater & solid waste pollution, unsustainable tourism pressure on reefs will be reduced through*	***Output 2.1*** *Reef positive livelihoods and business opportunities are implemented at Bar Reef, Kayankerni and Pigeon Island seascapes.* ***Output 2.2*** *Regional Cooperation Mechanism (RCM) established to*	**TOTAL:** *3,500,000* **Phase I:** *293,515*	*Design, incubation and investment readiness stages.*	*DWC, CC&CRMD, DFAR, MEPA, NARA, NAQDA, FCCISL, SLTDA, MoE, Local Government BSL, Hoteliers, Other Tourism Service Providers, Other Private*

[20] CORALL - Conservation of Reefs for All Lives and Livelihoods

positive business ventures	• *Clean Energy,* • *Plastic waste management,* • *Sewage and waste-water treatment,* • *Other land-based pollutants management,* • *Coral ecosystem restoration*	*programme preparation*	*reef friendly business opportunities with better livelihoods and income for local stakeholders* *Ad-hoc and non-science-based reef restoration initiatives that impacts integrity of reef ecosystems*	*promote coral friendly businesses and share best practices Between Sri Lanka and Maldives.* ***Output 2.3*** *Enhanced recovery of coral reef-dependent communities from major shocks in coral associated priority seascapes in Sri Lanka.*	**Grant co-financing:** *4,000,000.*		*Sector Companies, Bankers, PCA, Other Impact Investors, Media Universities, Other Research Institutes, CBOs* *NGOs including Sarvodaya, BRT, EFL, ORCA, NAFSO, LEF.*
3. Innovative Financing from Blue Economy Options (IFBEO) for building reef resilience.	*Phase I* • *Biodiversity Credits* *To be potentially explored in Phase II and III* • *Blue Bonds and Debt-for-Nature Swaps* • *Blue Carbon*	*All three priority seascapes and possible expansion into other potential sites studied during the programme preparation*	*Barriers for generating funds through innovative financing mechanism will be addressed. Appropriateness of revenue measures such as reef bio credits and blue bonds will be tested to generate finances to support reef conservation action.*	***Output 1.3:*** *Macro and replicable site level financing mechanisms are explored and piloted for coral reefs and community resilience in three priority seascapes in Sri Lanka.*	**TOTAL***:* *500,000* **Phase I:** *39,490* **Grant co-financing:** *1,000,000.*	*Design, incubation.*	*Universities, Other Research Institutes, DWC, CC&CRMD, DFAR, NARA, NAQDA, MoE* *NGOs including Sarvodaya, BRT, EFL, ORCA, NAFSO, LEF* *BSL, PCA, IIED, Other Impact Investors, Hoteliers, Other Tourism Service Providers, Other Private Sector Companies, Bankers, Media.*

Please refer to Figure 3 under Programme Strategy (Section 2) for a graphic presentation on how Sri Lanka Coral Reef Initiative (SLCRI) aims to protect coral reefs from extinction in three priority seascapes, linking its three solutions to the co-management arrangement, which is a prerequisite for solutions to be effective.

4.2 Solution 1: CORALL Conservation Trust Funds (CCTFs) established for effective co-management of coral reefs in three seascapes

Lack of integrated plans and means of implementing those plans were the main barriers to build resilience of selected coral reefs and associated ecosystems, especially in selected priority seascapes of Sri Lanka. The design of SLCRI program unfolds as a unique approach that links both the bottom-up and top-down approaches of integrated coastal and marine resource management through PPPPs, using co-management mechanisms in each seascape with means of sustainable financing. Hence, the SLCRI solution of CORALL (Conservation of Reefs for All Lives and Livelihoods) Conservation Trust Funds (CCTFs) will be launched with an initial contribution from the GFCR.

The CCTF will in part be financed by all income generating activities in the respective seascape which will have to contribute to strengthen the fund, in proportion to their net revenue, on monthly basis. This proportion is to be determined but will be in the range of 10% to 15% of net revenue. This range was informed by consultations with stakeholders during the proposal development phase. Contributions will be initially collected as voluntary contributions but over time it will made mandatory through appropriate regulation by way of a user fee of the seascape resources. Government entities to be involved in such regulation will be explored during the legal and institutional review on operationalisation of Conservation Trust Funds. The rationale for all stakeholders who operate in the seascape with income generating activities contributing to this fund is, that the fund ensures sustainable management of the seascape through effective enforcement, while no one opposed to this idea in our extensive consultations done in preparing the proposal. Enterprises of sustainable tourism, sustainable fishing, sustainable aquaculture/mariculture, and all other revenue generating enterprises will contribute to the fund, as better managed resource will have higher ecosystem services on which their enterprises are dependent on. That will in turn ensure the ecosystem service provision in perpetuity.

The funds will mainly be used for the co-management of the three seascapes with effective MPA management, providing necessary finances to the CMCs and CCGs for effective enforcement of regulation at seascapes of Bar Reef, Kayankerni and Pigeon Island to arrest illegal activities threatening the survival of coral reef. These funds will support enhanced law enforcement, conservation efforts and promote environmentally responsible practices, while providing a sustainable and innovative approach to addressing coral reef degradation. Furthermore, CCTFs will also support initiating the use of Management Effectiveness Tracking Tool (METT) and Green Listing of MPAs in the three seascapes. This will have to be then taken up mainly through co-funding coming from DWC. Therefore, CCTF will enable implementation of the co-management at seascape level, facilitating the achievement of the theory of change, in preventing coral reef extinction.

The CTFs can also act as a revolving loan fund for sustainable livelihoods and reef positive very small businesses with concessional loans to support coral-positive income generating activities for local fishing community. Otherwise, these communities would engage in unsustainable extractive activities in the seascape. Unlike traditional funds, a revolving fund is designed to recirculate the initial capital, continually replenishing itself through the repayment or reinvestment of funds generated from its activities. As such, the fund operates on a self-sustaining model, where the generated revenue is used to finance ongoing conservation projects and initiatives. This allows for a continuous cycle of financial support, ensuring the fund's longevity and the ability to address evolving conservation needs over time. The expertise for deploying concessional loans will be sourced from Sarvodaya, who have performed similar activities throughout the island, while they will set up and operationalise CCTFs in all three SLCRI priority seascapes.

Challenges for implementing this solution include securing adequate and sustained funding, obtaining buy-in and cooperation from various stakeholders, navigating complex regulatory frameworks, and ensuring the solution align with the unique socio-economic and environmental context of Sri Lanka. Additionally, addressing behavioural changes and creating awareness among the general public and businesses may pose challenges. Overcoming these obstacles requires effective governance, multi-stakeholder collaboration, scientific evidence, and a commitment to long-term sustainability. Most national attempts to create conservation trust funds have failed due to bureaucratic complexities, competing priorities, and difficulties in engaging diverse stakeholders. Government entities have attempted to manage such trust funds where the collection of funds was channelled to Consolidated Fund of the Government. In return, what the sector got was an allocation irrespective of the collection. Learning from the past mistakes, CCTFs will be established according to Conservation Finance Alliance (CFA) guidelines with having trusted NGOs to lead the initiatives. The co-management committee will play a crucial role in managing the revolving conservation fund. Therefore, in SLCRI these funds will be designed to be managed by credible non-governmental entities at seascape level and closely monitored by the CMCs and the community.

Capitalization and Income Generation

The CCTFs at the three seascapes are to be established with a contribution from GFCR grant estimated at USD 115,000 for the Bar Reef seascape, USD 100,000 for the Pigeon Island seascape, and USD 80,000 for the Kayankerny Seascape. There will be effective marketing of the concept to attract funding from all possible sources. This will include contributions from large donor funded projects operating the seascapes, philanthropic contributions from local and international donors, tourism sector operators in respective areas, mariculture aquaculture enterprises and all who generate a net positive revenue in these seascapes are expected to contribute to the fund as it enhances long awaited effective enforcement of laws in the area for better resource management.

It is expected to generate about USD 50,000/year from each CCTF in Phase II and expected to gradually increase it to USD 100,000/year from each CCTF in Phase III. Hence, this will generate 50,000/yr in phase II (1.5 yrs) and 100,000/yr in the Phase III (3 years), bringing it to a total of 375,000 over 4.5 years, i.e. an average of USD 85,000 per year from each CCTF, making a total of 255,000 per year from all three seascapes for the solution. This is anticipated from the sources mentioned above. The Conservation Trust Fund will gradually form the main finance source for enforcement of law coordinated the by respective CMCs. Any work envisaged in co-management plan for CCGs will also be funded by this fund.

Table 3: Programme Solution #1: CORALL Conservation Trust Funds (CCTFs) established for effective co-management of coral reefs in three seascapes.

18-month GFCR Grant Cost (USD)	Total GFCR Grant Fund Cost Estimate (USD)	Grant Co-financing (sources)	TOTAL (USD)
480,250 *(budget lines for outputs 1.1 and 1.2)*	2,500,000	4,000,000* Anticipated (DWC, CC&CRMD, DFAR, FD, SLTDA, SLCG, MoE, MoWFRC, Local Governments, Sarvodaya, EFL, BRT, NAFSO, LEF, BSL, Media)	6,500,000

Revenue Generation (USD/yr)	Commercial Investment (USD)	Debt, Equity, or N/A	Type of Investor (Public or Private)	GFCR Grant to Commercial Investment Leverage
255,000	None	N/A	None	N/A

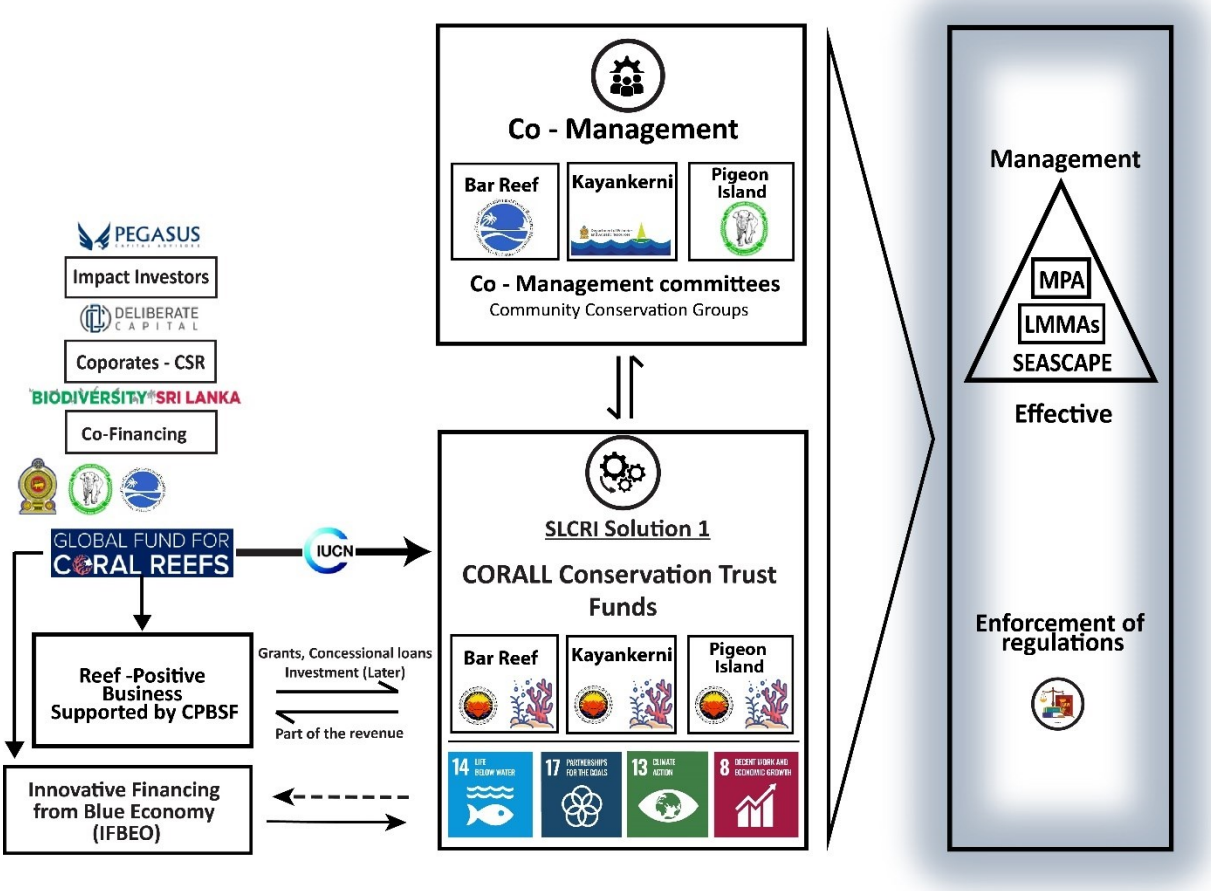
This solution will be managed mainly by NGO Sarvodaya in all three priority seascapes with the leadership given by IUCN. Seascape level CCTFs will be managed by Sarvodaya with a strong governing body at each seascape including government, non-governmental, private sector, and civil society agencies. Government agencies in the governance mechanism of each fund will include DWC, CC&CRMD, DFAR, NARA, MEPA, SLTDA, FCCISL, MoE and Local Government agencies. Community will be represented primarily through Seascape Co-management Committee, Fisheries Cooperative Societies, Community Conservation Groups and other CBOs present in each seascape. Private Sector including hoteliers and other tourism service providers, exporters of fishery products, other companies, impact investors, and bankers will also play a dominant role in the CCTF management.

EFL is working on appropriate modalities for setting up of CTFs in Sri Lanka for the SLCRI. The initial step is studying CTFs undertaken in other countries and to identify institutional and legal aspects related to setting up such according to CFA guidelines. If there are any barriers and proposals are expected to overcome with necessary amendments to enable establishment of CTFs in Sri Lanka. This is already initiated in the form of a pre-feasibility study from the programme preparation grant and will be completed by the time of the inception of SLCRI. During this pre-feasibility study they explore if there are any serious barriers for setting up of CTF in Sri Lanka, and they have informed that it is legally possible. This will lead to the Activity 1.2.1 – "Legal and institutional review and a feasibility study on establishing Conservation Trust Funds (CTFs) for coral reef conservation in three priority seascapes and identification of management arrangements to enable CTF establishment" for which the EFL will be formerly contracted.

During the first six months of the Phase I of the Grant, a comprehensive legal and institutional review will be done for setting up of CTF in Sri Lanka. The next year to be used to get the required provisions are to be made effective and CCTFs are established at each seascape. By the end of the Phase I, at least one CCTFs is expected to be up and running with limited capacity to contribute towards facilitating effective MPA related enforcement as in the co-management arrangements with well-established governing mechanism in place. If there are delays in getting required revisions in some areas, it is expected to get them in place gradually so that the full implementation of CTF at each site is envisaged during 1.5 years of inception. It is accepted as the best solution by the stakeholders and with the current economic downfall in the country support for this kind of action is high as it takes off the burden on the government. When effective enforcement is in place, the contributions to CCTFs will begin from all users of the seascape involved in income generating activities. Up to that the CCSFs will function with GFCR grant find and Co-financing of all stakeholder agencies. From phase II onwards it will expand into revolving funding supporting sustainable livelihoods and small businesses. Lessons from each CCTF will be shared at the National Steering Committee by respective CMCs at each seascape, together with Sarvodaya, who manages CCTFs in all three seascapes.

Indicators to evaluate the effective implementation of CCTFs may include the total amount of funds raised, the number of projects funded, and the percentage of funds allocated to reef conservation initiatives. Impact targets could involve achieving a specific increase in marine protected areas, reef health index scores, or the engagement of private sector partners in conservation efforts. Impact targets might involve achieving a certain level of overall reef health including coral recovery, abundances of fish and

other fishery resources and reduced instances of coral diseases attributable to improved water quality. If the establishment of CCTF is delayed due to unforeseen reasons, then the CMCs at each site will be used to deliver a similar work with required modifications.



CORALL= COnservation of **R**eefs for **A**ll **L**ife and **L**ivelihoods

Figure 4. Graphical illustration of the solution 1: CORALL Conservation Trust Fund (CCTF) with other solutions proposed in the Sri Lanka Coral Reef Initiative (SLCRI)

4.3 Solution 2: Coral Positive Business Support Facility (CPBSF) to design and promote reef-positive business ventures

The Coral Positive Business Support Facility (CPBSF) to be established by the programme will take the lead in identification, assessing feasibility, designing, and promoting reef-positive business ventures at each selected seascape. The solution will act as an incubator for business ideas on private sector-led reef-positive business ventures, with the anticipation of bringing in commercial investment of about USD 14 million., estimated for the entire portfolio of the CPBSF. This dedicated team will develop business cases for reef positive interventions proposed by coastal, marine and reef experts. They will prepare business proposals based on those ideas and will assist businesses in providing tailor-made solutions. They will also undertake technical, social, economic, and environmental feasibility of those interventions. The CPBSF will also coordinate the RCM with Maldives.

The CPBSF will support activities in the priority seascapes covering, ecotourism, sustainable mariculture/aquaculture, and sustainable livelihoods mechanisms including small scale sustainable fisheries, waste management, and clean energy applications, through technical assistance in creating value, introducing best practices, and reforming supply chains, while de-risking private sector finances and provide incentives for private sector engagement. If the CPBSF proposed initiatives will not be attractive to potential investors as they may have better opportunities elsewhere, the solution 2 is expected to provide some incentives in getting investments. These incentives, especially in de-risking private sector investment, could be in forms of concessional loans, loan gurantees and some grant componet to investment.

Attempts will also be made under this solution to handle stressors on coral reefs from land bases sources of pollution including nutrients from agriculture lands, plastic and other waste materials brought to seascapes. These will serve as alternative livelihoods for coastal communities, offering an opportunity to diversify income sources and reduce reliance on traditional activities that may have contributed to coral reef degradation. They have a direct link to the programme's Theory of Change by aligning economic interests with coral reef conservation and sustainable practices. By engaging the private sector in reef-positive initiatives, these ventures promote responsible and nature-friendly economic activities that support local communities and protect marine ecosystems. In addition to propagating coral friendly income generating ventures and supporting those who are engaged, each one of these income generating activities will also be expected to make contributions to the CCTFs for strengthening better enforcement of regulations through co-management. As mentioned under Solution 1, all income generating activities in the seascape will have to make financial contributions to the relevant CCTF enabling sustainable management of the seascape by way of resourcing the strengthened law enforcement. After covering the CPBSF's operational costs, 60% of the net revenue/surplus generated under this solution will be channelled to CCTF for sustainable management of the seascapes.

This solution also has a special role to play in contributing to transformation of livelihoods of coral-dependent communities by way of engaging them into the business ventures. The focus on sustainable practices and community involvement reduces the reliance on harmful interventions that contribute to coral reef degradation, thus increasing the chances of coral reefs' survival, preventing their extinction in our lifetime. As communities engage in more environmentally responsible activities, overfishing, destructive fishing, and habitat destruction can be minimized by alleviating pressure on coral reef resources. Moreover, by promoting community-based conservation efforts and enhancing awareness

about the importance of coral reefs, the solution fosters a sense of ownership and responsibility among local communities, leading to a more sustainable relationship with marine ecosystems and contributing to the overall conservation of coral reefs.

Business ideas will also be generated through the Regional Cooperation Mechanism (RCM) to be established between Maldives and Sri Lanka and coordinated by the CPBSF, where investments from hospitality sector and waste management sector operators will have opportunities to learn and share ideas between both countries. Large-scale investors such as the GFCR Investment Fund, managed by PCA will also be linked to this solution. The three priority seascapes will be promoted for investments through specialized entities including the GFCR Investment Fund - Pegasus Capital Advisors (PCA), and local entities such as Centre for Smart Future (CSF) among others.

As some of these potential interventions may have unintended social and environmental consequences, all interventions will be assessed for safeguards under the IUCN's Environmental and Social Management System (ESMS) guidelines. The pipeline of projects will evolve in the grant phase of the SLCRI. There is great scope for ecotourism linked with Bar Reef associated marine life, and terrestrial attractions such as Wilpattu National Park that can be developed into a high-end tourism opportunity for a global brand, together with development of sustainable aquaculture. PCA (represented by Deliberate Capital) indicated the potential for investment opportunity present in these lines for Bar Reef associated region. Similar interventions will be promoted in Pigeon Island and Kayankerni seascapes along the east coast. Investing in mariculture of seabass in Trincomalee has been explored to great extent by PCA with Oceanpick Pvt Ltd. Small scale interventions to manage plastic/solid waste including ALDFG in fishing areas is considered under the MARISSOL project led by IUCN in the Gulf of Mannar that can be upscaled in other areas including the three priority seascapes of SLCRI. PCA is also looking at initial idea of investment into seafood – tourism - renewable energy by Atman Group.

A list of potential businesses categories that could receive support through the CPBSF, that were identified from consultations and socio-economic surveys during the programme development period for each of the three seascapes are provided in the Table, in the order of priority of potential investment. Furthermore, a detailed landscape assessment of potential businesses in each of the three priority seascapes will be conducted early during the phase I of the programme once the CPBSF is established.

Table 5: Potential business categories that could receive support through the CPBSF, identified from consultations and socio-economic surveys during the programme development period for each of the three seascapes.

Priority	Bar Reef	Kayankerni	Pigeon Island
1	Sustainable tourism	Sustainable tourism	Sustainable tourism
2	Sustainable fisheries	Sustainable self-employed entrepreneurships (e.g., cottage industries)	Sustainable self-employed entrepreneurships (e.g., cottage industries)
3	Sustainable mariculture/aquaculture	Sustainable mariculture/aquaculture	Sustainable fisheries
4	Sustainable self-employed entrepreneurships (e.g., cottage industries)	Sustainable fisheries	Electric powered/energy efficient boats
5	Coral restoration/research oriented business	Coral restoration/research oriented business	Sustainable mariculture/aquaculture

6	Agriculture and Livestock	Waste Management	Coral restoration/research oriented business
7	Waste Management	Electric powered/energy efficient boats	Agriculture and Livestock
8		Agriculture and Livestock	Waste Management

Challenges for this solution may include regulatory barriers, limited financial resources, and the need for extensive community engagement and capacity building. Ecotourism may face challenges related to managing visitor numbers to prevent reef degradation and balancing the economic benefits with conservation priorities. For sustainable mariculture/aquaculture, challenges may involve addressing potential conflicts with existing fishing practices and ensuring proper site selection to avoid negative social and ecological impacts. FAO guidelines on sustainable aquaculture being developed will also be followed to minimise negative impacts on people and nature. Abandoned shrimp aquaculture ponds are potential sites for promoting low intensive sustainable aquaculture in Bar Reef associated areas in the Northwestern Province of Sri Lanka. Some of the abandoned shrimp aquaculture ponds can also be used for assisted natural regeneration of mangroves with the engagement of private sector. For sustainable livelihoods mechanisms, challenges may include addressing gender disparities, cultural considerations, and creating value chains for sustainable products.

Revenue streams for ecotourism come from visitors paying for guided reef tours, snorkelling, or diving excursions, eco-friendly accommodations, educational programmes, and sales of sustainable souvenirs and local products. Revenue streams for sustainable mariculture/aquaculture include the sale of responsibly harvested seafood, such as sea bass, crabs, and seaweed, to local and international markets. Additionally, income can be generated through eco-certifications and value-added products, like processed seafood and aquaculture-related services. Revenue streams for sustainable livelihoods mechanisms involve income from various sustainable activities, such as eco-friendly handicrafts, sustainable farming products, and sustainable fisheries management. Some of these activities may be accommodated by the CCTFs targeting local cottage industries. However, their scale of operation will be much smaller than the initiatives considered through the CPBSF.

Large investments in reef positive businesses such as tourism, mariculture/aquaculture, sustainable fishing, renewable energy, and waste management will bring an estimated total revenue of about USD 200,000/year into sustainable reef management initiatives, after about three years from inception. That is the contribution to coral reef conservation expected in phase II and III from commercial investments. This will cover the cost of CPBSF (operational cost and incubation/piloting costs) beyond the grant period. This will also contribute to the CCTFs, it is expected that 60% of net surplus to be channelled to CCTFs. Most of the solutions will become mature enough to take on commercial investments in about three years. Technical assistance is needed to brokerage technically feasible solutions to be marketed with large investors like pension funds in the developed world.

Total GFCR Grant Fund Cost Estimate of USD 3,500,000 will be used to support at least 12 businesses in three priority seascapes, anticipating commercial investment of over USD 1 Million for each business. At least three businesses are expected to be commenced during the phase I, one each at the three priority seascapes. These businesses will be supported by the CPBSF in the form of technical assistance as well as grants where appropriate. Technical assistance would be in forms such as guidance for business proposal templates and development, highlighting areas that they are missing out, incubations support, etc.

The beneficiaries of the solution include women and men in coastal communities, local businesses, marine ecosystems, and tourists. Coastal communities benefit from diversified income sources, reduced pressure on coral reef resources, and improved livelihoods. Local businesses gain economic opportunities through sustainable aquaculture, ecotourism ventures, and eco-friendly products. Marine ecosystems benefit from reduced overexploitation and better conservation practices. Tourists enjoy responsible and educational experiences while contributing to conservation efforts.

Table 4: Programme Solution #2: Coral Positive Business Support Facility (CPBSF) to design and promote reef-positive business ventures.

18-month GFCR Grant Cost (USD)	Total GFCR Grant Fund Cost Estimate (USD)	Grant Co-financing (source)	TOTAL (USD)
293,515 *(budget lines for outputs 2.1, 2.2 and 2.3)*	3,500,000	4,000,000 Anticipated (Hoteliers, Other Tourism Service Providers, Other Private Sector Companies, Bankers, BSL, Media, Sarvodaya, BRT, EFL, LEF, DWC, CC&CRMD, DFAR, MoE, MoW&FRC, Universities, Research Institutes Local Governments, CCC, FCCISL)	8,500,000

Revenue Generation (USD/yr)	Commercial Investment (USD)	Debt, Equity, or N/A	Type of Investor (Public or Private)	GFCR Grant to Commercial Investment Leverage
200,000	14,000,000	50% each	Both	(1:4)

There are many partners for the proposed solution including hoteliers, other tourism service providers, other private sector companies, bankers, Impact investors, PCA, Other Impact Investors, BSL, CBOs, EFL, Sarvodaya, EFL, BRT, LEF and Media. DWC, CC&CRMD, DFAR, MEPA, NARA, NAQDA, FCCISL, SLTDA and MoE as well as Local Government has been identified as government partners to collaborate in this solution in a facilitating role, where the private sector will be the key players. Some of these investments are already being considered by PCA (represented by Deliberate Capital) in managing GFCR investment fund. Altogether, this solution is expected to generate an anticipated investment of about USD 14 million during the grant phase of the SLCRI programme.

Sources of co-financing for the solutions of ecotourism, sustainable mariculture/aquaculture, and sustainable livelihoods mechanisms can come from various stakeholders. Government agencies may allocate funds to support ecotourism initiatives and sustainable aquaculture projects through grants and subsidies. NGOs may provide financial support and technical assistance to implement sustainable livelihood programmes. Private sector partners, such as seafood companies, ecotourism operators, and eco-friendly businesses, may invest in these solutions to align with their corporate social responsibility goals. Additionally, international development agencies and donors may contribute funding and resources to promote sustainable practices in the coastal sector. Collaboration among these sources of co-financing can strengthen the implementation and impact of this solution on coral reef conservation and coastal

community development. These potential sources of co-financing are provided in the table 4, while this amount of co-financing can be substantiated due to many partners agencies that have shown continued interest for such a solution during stakeholder consultations. IUCN is currently in the process of further discussions for obtaining their co-financing commitments.

These will be shared with Ceylon Chamber of Commerce and other business forums in Sri Lanka and globally. It is also expected to call for proposals in the Phase I of the SLCRI when the Co-management plans are in place and CPBSF are functional. BSL also will contribute to spread the message in bringing in potential corporate partners. It is also expected to reach out to global community through GFCR Investment platform as well.

Indicators and Impact Targets for Ecotourism:

- Indicators: Number of visitors engaged in eco-friendly activities, revenue generated from ecotourism ventures, percentage of income reinvested into conservation efforts, and positive feedback on educational programmes.
- Impact Targets: Increased awareness about coral reef conservation among visitors, enhanced marine conservation efforts, economic benefits to local communities, and the establishment of marine protected areas.

Indicators and Impact Targets for Sustainable Mariculture/Aquaculture:

- Indicators: Quantity of sustainable seafood produced, number of eco-certifications obtained, percentage reduction in destructive fishing practices, and increased adoption of sustainable aquaculture methods.
- Impact Targets: Improved income and livelihoods for coastal communities, reduced pressure on wild fish stocks, enhanced marine biodiversity, and increased market demand for sustainable seafood.

Indicators and Impact Targets for Sustainable Livelihoods Mechanisms:

- Indicators: Number of sustainable livelihood activities initiated, percentage reduction in reliance on coral reef resources, income diversification for coastal communities, and successful implementation of sustainable farming practices; For plastic waste management, indicators may include the quantity of plastic waste collected and recycled, reduction in marine litter levels, and the adoption of sustainable packaging practices by businesses.
- Impact Targets: Improved economic resilience for coastal communities, reduced overexploitation of coral reefs, enhanced community participation in conservation efforts, and increased adoption of sustainable practices in the coastal sector; For plastic waste management, Impact targets could involve reduced plastic debris entanglement and ingestion by marine life, as well as lowered overall ecological impact of plastic pollution on coral reefs and marine ecosystems.

Indicators for businesses incubated by CPBSF:

- Indicators: Number of coral positive businesses incubated in each phase of the SLCRI.
- Impact Targets: interest expressed by prospectives investors on at least three businesses incubated during the phase I, at least six businesses incubated are field implemented at the end of phase II and six more coral positive initiatives are field implemented

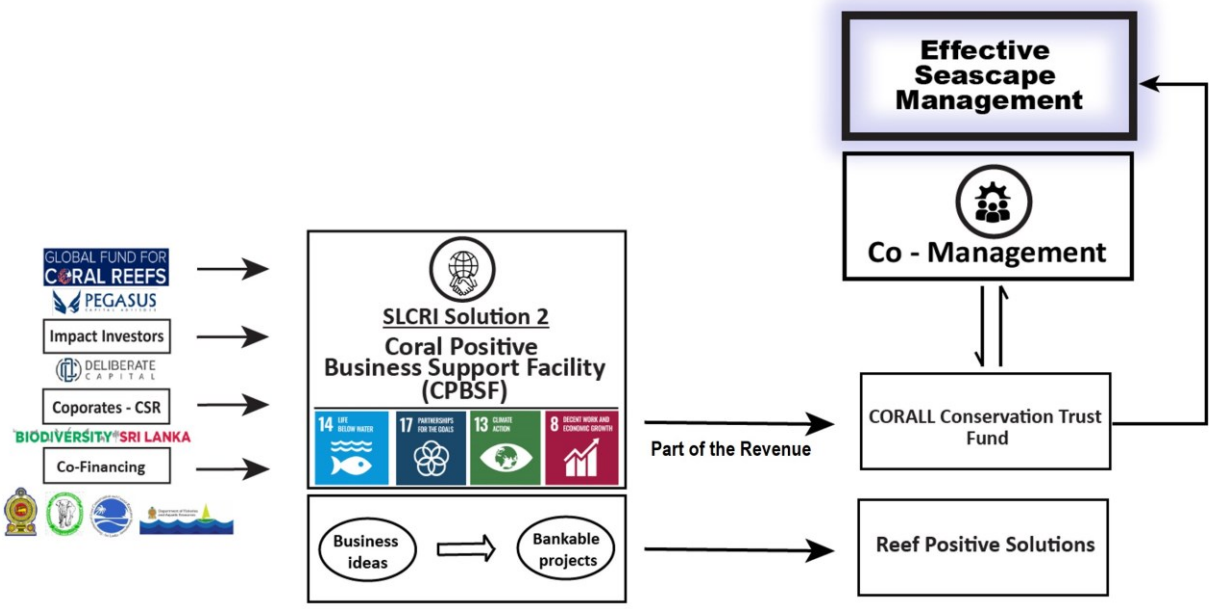


Figure 5. Business model graphic linking the solution 2: Coral Positive Business Support Facility (CPBSF) with other solutions proposed in the Sri Lanka Coral Reef Initiative (SLCRI)

4.4 Solution 3: Innovative Financing from Blue Economy Options (IFBEO) for building reef resilience

Sri Lanka is blessed with sea around the island covering almost of seven times of the size of land in its Exclusive Economic Zone (EEZ), but we are yet to optimally use them for economic development of the country. There are many coastal and marine ecosystems covering coral reefs, seagrass beds, coastal beaches, mangroves, sand dunes, lagoons, and estuaries. Assessing ecosystem services of those unique areas, use them in innovative financing mechanisms such as Blue Bonds have a high potential for Sri Lanka. These unique resources are considered global commons which are naturally short supplied, so there is high demand for conservation of those remaining resources. There is lack of technical capacity in such assessments and formulation of innovative financing mechanisms. Belize Blue Bond is a classic example where they raise substantial financing for development and conservation under economic hardships.

With the current economic crisis, importance of coastal and marine resources-based economy – or Blue Economy for Sri Lanka has gained renewed interest. While meeting SDG 14 targets, Blue Economy appears to be one of the promising pathways that could contribute to address challenges of the economic crisis. It is proposed to explore the potential in using Blue Economy tools as financing mechanisms for the SLCRI. As these are not tested in Sri Lanka, their potential will be exploded in the Phase I of SLCRI with the view of applying some of them in the subsequent phases as real solutions. Main areas being discussed in Sri Lanka include Blue Bonds, Bio-credits, Blue Carbon and Debt-for-Nature Swaps (DfNS). Some work in these lines is being facilitated by Presidential Secretariat in the resent past but no momentum gathered. Global Green Growth Initiative (GGGI) is currently exploring the potential for DfNS for Sri Lanka. Ocean Country Partnership Programme of UK initiate discussions on Marine Spatial Planning for building foundation for Blue Bonds in Sri Lanka. Ministry of Environment has setup a working group to explore innovative

financing under Blue Economy, while the CSF together with BRT are convening a 'Knowledge roundtable on innovative financing for marine conservation' supported by the Oceans 5 Marine Protected Areas Project. However, none of these have gone very far. Therefore, further exploration work is expected to undertake in the Phase I to identify any promising tools out of the potential tools such as Blue Bonds, Blue Carbon, Bio-credits and DfNS.

Out of these the DfNS has the biggest opposition from the public partly due to misconception of the tool as 'selling' natural heritage to foreign parties. It is unlikely that this ambiguity will resolve despite the studies being undertaken by GGGI. Therefore, the solution 3 will not have major expectation on DfNS as the most promising financing mechanism. However, it will also be considered to study over the SLCRI programme life as things could change for the better.

Following the successful Belize case, Blue Bonds has a great potential in Sri Lanka to attract external large funds such as Pension Funds for investing in nature – in our case coral reefs. One of the requirements for marketing Blue Bonds is to have well-prepared management plans for the resources that are put out for bonds. Preparation of Co-management plans for three priority seascapes under SLCRI during the Phase I therefore will provide Sri Lanka the advantage for approaching Blue Bonds. It is expected to get a multilateral bank like ADB or WB with a conservation body like IUCN to follow the pathway that Belize has successfully demonstrated in 2021. Therefore, SLCRI is expected to make further contributions towards realising Blue Bonds for Sri Lanka providing pre-requisites in selected seascapes. However, it will not be a complete activity under the SLCRI.

In addition to undertaking exploratory work in above mentioned areas, the major interest in the SLCRI Phase I will be on Biodiversity Credits (Bio credits). Bio credits were also criticized when used for compliance/off setting. When they are not being used for compliance, there is no controversy and investors in these will be recognized for doing good for nature. There is demand for bio credits for recognition from the private sector, IUCN engaged in a partnership with BSL where bio credits are tested for a terrestrial ecosystem. Hence bio credits and blue carbon have a greater potential to attract impact local private sector. This will be explored further through BSL and business chambers in Sri Lanka. DfNS and blue bonds will take many years in establishing feasibility, while they hold several uncertainties. Hence biodiversity credits will be the focus for phase I of the SLCRI, while DfNS, blue bonds and blue carbon can be pursued in subsequent phases.

Furthermore, it is expected to learn from the ongoing GFCR project in Maldives with a component on conducting feasibility assessments on biodiversity credits in partnership with Plan Vivo. This initiative could be linked with SLCRI through its Regional Cooperation Mechanism with Maldives, in setting up a mechanism for biodiversity credits in Sri Lanka. Initial discussions were held with International Institute for Environment and Development (IIED) during the PPG stage to engage them as a technical expert to study the feasibility of innovative financing mechanisms in each seascape and recommendations made for setting up a biodiversity credit mechanism for SLCRI during its Phase I, that can be piloted during the Phase II. It is expected to initiate joint work between IUCN and IIED to prepare the platform to for take up bio credits by investigating ways of addressing three challenges in designing and implementing an effective bio credit market for Sri Lanka taking the SLCRI as the case. These challenges as identified are: 1. how to measure a unit of biodiversity rigorously and equitably; 2. how to generate sufficient demand and sales of bio credits; and 3. how the majority of the revenue from a bio credit scheme can be channelled back to local communities who will create bio credits for nature and climate outcomes.

It is expected to use biodiversity credits for enhance revenue generation for SLCRI, with the potential for contributing to CCTF in strengthening the programme. Within the overall co-management framework, proceeds from this solution, contributing to CCTF, will reinforce the co-management of respective seascapes with effective law enforcement.

Table 6: Programme Solution #3: Innovative Financing from Blue economy options for building reef resilience

18-month GFCR Grant Cost (USD)	Total GFCR Grant Fund Cost Estimate (USD)	Grant Co-financing (source)	TOTAL (USD)
39,490 *(budget line for the outputs 3.1)*	500,000	1,000,000* Anticipated Ministry of Environment, Ministry of Finance, MoW&FRC NPD, ERD, Universities, ADB, WB, Research Institutes, DWC, CC&CRMD, DFAR, OCPP, BSL, Tourism Service Providers, Other Private Sector Companies, Bankers,	1,400,000

Revenue Generation (USD/yr)	Commercial Investment (USD)	Debt, Equity, or N/A	Type of Investor (Public or Private)	GFCR Grant to Commercial Investment Leverage
TBD	1,000,000	50% each	Both	(1:2)

When the SLCRI is sufficiently matured, and governance mechanisms are well in place these seemingly controversial means of revenue streams will be explored with sufficient consultation and clear guidelines. If they meet all requirements, SLCRI will take the lead in piloting at least one measure in Pigeon Island or Kayankerni seascapes during Phase II of the programme. Subsequently, based on lessons learned they will be considered to the test in other areas including Bar Reef during the subsequent phases of the programme. These sustainable economic activities are expected to finance coral reef conservation. Through this solution, it is expected to integrate conservation and economic growth, which provides a pathway for long-term financial sustainability and community engagement, ultimately increasing the chances of preventing coral reef extinction. As a starter in attracting Sri Lankan corporate sector for investing in blue economies, an initial coalition of corporate partners is being mobilized through the BSL to support scientific approaches of coral restoration in Kayankerni through their CSR windows, with the intention of later developing into a coral restoration-based tourism initiative with larger local investments. A call for expressions of interest was released on the 21st September 2023 in conjunction with the Annual Technical Sessions of the BSL.

There is renewed interest at the national level in investing in nature. Initiatives such as GEF/IUCN/MoE Natural Capital Assessment and Accounting for Coastal Ecosystems, Marine Spatial Planning by Ocean Country Partnership (OCPP) under the UK government, GGGI's preliminary work on Debt for Nature Swaps in Sri Lanka, UNDP's BIOFIN, ADB's initiative on assessing ecosystem services of priority ecosystems using

InVEST models, Central Bank's Sri Lanka Green Financing Taxonomy, Road Map for Blue Bonds, and the Knowledge Roundtable on Innovative Financing for Marine Conservation are a few ongoing initiatives in Sri Lanka. In this backdrop the country is getting ready to create an enabling environment for investing in nature. Progress made in these discussions at the national level in blue economy will facilitate SLCRI venturing into impact investment, blue bonds, biodiversity credits and bioprospecting etc. with less resistance from interested parties.

It is expected to determine the revenue generation from these initiatives during the Phase I of the programme. Required technical assistance to Sri Lanka can come from sharing best practices from the other GFCR countries on these solutions to formulate feasible projects to mobilise the programme's Theory of Change, and linkages to large international investors through PCA invest in Sri Lanka. RCM to be established through SLCRI programme with Maldives would be the first of such knowledge sharing ventures. Altogether, this solution is expected to generate an anticipated investment of about USD 2 million during the SLCRI programme.

Fostering economic growth and income diversification, the model empowers communities to take an active role in preserving their natural resources while improving their socio-economic conditions. Moreover, the marine ecosystems and coral reefs themselves are also beneficiaries of this approach, as the technical-based restoration efforts, supported by the investment contribute directly to the conservation and rehabilitation of the coral reef ecosystems, ultimately ensuring their long-term health and resilience. Furthermore, the model may attract private sector partners and investors, who can gain social and environmental returns by participating in sustainable business ventures, thus promoting corporate responsibility, and creating a positive impact on the overall marine ecosystem and local communities.

Universities, Other Research Institutes, DWC, CC&CRMD, DFAR, NARA, NAQDA, MoE, Sarvodaya, BRT, EFL, BSL, ORCA, LEF, PCA, Other Impact Investors, and Media are considered as the implementing partners from the government and NGO sectors for this solution. These are the best solutions having high potential for scaling up, some of these can even go to national level with the setting up of Marine Spatial Planning for Sri Lanka to cover a programme like Sri Lanka Blue Bonds following the Belize case. Furthermore, private sector partners such as hoteliers, other tourism service providers, bankers and interested parties from other private sector would ensure the sustainability of this model.

OCPP is working on Marine Spatial Planning (MSP) and MPA capacity building in Sri Lanka for last three years and will continue for the next two years, large number of GoSL agencies are contributing to this sector including agencies covering DWC, CC&CRMD, DFAR and NARA. GEF/FAO/IUCN regional project BOBLME II planned for next five years will have components on fisheries and environmental aspects of coastal resources in Sri Lanka. All these can be identified as possible co-financing option for the programme.

Indicators and Impact Targets for the solution:

- Indicators: Number of blue economy related financing tools initiated in the SLCRI.
- Impact Targets: At least one initiative per priority seascape to be realized during SLCRI with 2 million USD minimum investment to be generated during the programme.

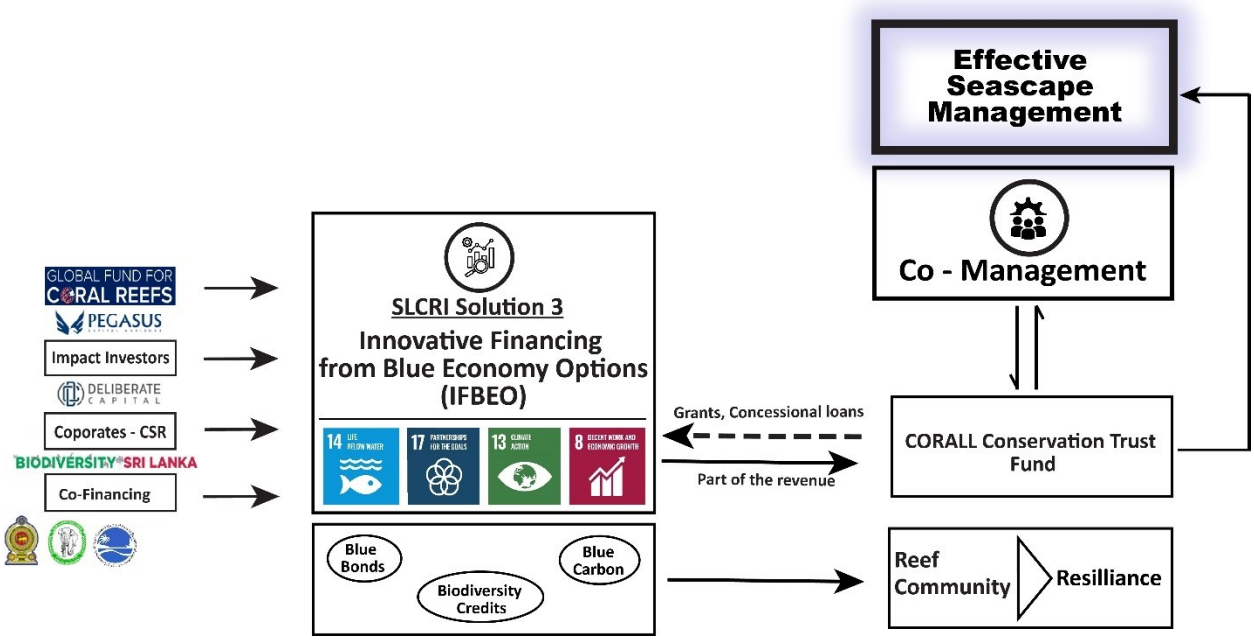


Figure 6. Business model graphic linking the solution 3: Innovative Financing from Blue economy options for building reef resilience (IFBEO) with other solutions proposed in the Sri Lanka Coral Reef Initiative (SLCRI)

5 Replicability and Sustainability

Sri Lanka Coral Reef Initiative (SLCRI) is expected to make a paradigm shift in conservation and sustainable management of coral reefs and associated environs in Sri Lanka. Proposed programme is centred around addressing the threat of extinction of coral reefs due to ongoing anthropogenic and natural drivers in Sri Lanka at three priority seascapes namely Bar Reef, Kayankerni and Pigeon Island, out of the six sites studied under the preparation of this programme. The programme is designed to deal with key challenges i.e. lacking integrated planning, and joint implementation of management actions, and not being supported by sufficient financing. SLCRI will demonstrate how to address them in the three priority seascapes over a period of 6 years. The approach selected for this is to engage government, non-government, academia, local community and private sector from the design stage to build ownership of the programme to all concerned parties. It is also designed to be implemented through co-management modality with sustainable financing, where such effective co-management is not evident at present. All actions will be taken to create enabling conditions with the support of grant funding and creating sustainable and blended financing mechanisms with Conservation Trust Funds and bringing in large global funds and local private sector to invest in nature, with the expertise from Pegasus Capital Advisors (PCA). The whole idea is to design and implement a model in building coral reef resilience of selected seascapes as described above which will run in perpetuity without any major external assistance. Success of SLCRI will be measured using Management Effectiveness Tracking Tool (METT) applied at all sites and appropriate corrective actions will be taken in the process based on findings.

The investment from GFCR will build these best practices over the project period of 6 years at three priority seascapes and will be taken up by others in remaining areas of coral reefs. The remaining three areas studied will be the best areas where preliminary work such as stakeholder consultations and biophysical and socio-economic baselines are in place. It's a matter of replicating the best practices from the pilot seascapes by mobilizing some external funds. The proposed solutions to address challenges in building resilience of coral reefs in Sri Lanka will demonstrate relevance and feasibility in investing in nature, that will be communicated among other interested parties to join hands for replicating best practices in other areas of potential in reef resilience building.

CC&CRMD has already identified the three priority landscapes to be included in their revised CZ&CRMP as Special Management Areas (SMAs). This will provide legal grounding to the proposed co-management plans. They have also indicated that they are willing to include any future such priority areas in the revisions of the CZMP. This will also provide the government commitment to manage these large areas as government priorities, which is a major factor towards sustainability. Furthermore, the National Advisory Committee, who guided this project preparation phase has agreed that this is the way to handle threats to coral reefs and march towards achieving resilient reefs by 2030. That includes buy-in from policy making bodies and mandated institutions and experts demonstrating fullest support in the implementation phase guaranteeing sustainability. Furthermore, this ensures the ability of establishing seascape co-management meachanism through multi-sector collobration, which is considered as a pre-requisite for the success and the sustainability of the SLCRI and its interventions. Understanding and agreement reached through the well-engaged programme development phase would ensure that the multiple sectors involved will maintain the synergies in sustaining the co-management mechanisms in each seascape under the Government departments identified for leading the co-management in each. Further, the multiple sectors and agencies involved in the programme development will continue to sit in the National Steering Committee of the SLCRI, ensuring the co-management will be strengthened along the programme implementation, achieving it sustainability beyond 2030 even without the programme.

Through the effective collaborative planning and implementation of co-management plans trust and confidence in the management will be built so that all parties will contribute to it. With availability of funds through CTFs, better law enforcement is possible for DWC with engagement of the SLCG. Better enforcement with required capacity and resources will deter illegal activities as fines will be too high. Also, the plans to engage those who practice illegal activities in the programme will turn out to be more profitable for them and to all, as the long-term ecosystem benefits these natural resources would bring for all with the proposed management arrangements will overweigh the meagre revenues from illegal actions.

The Conservation Trust Fund operates as a dynamic and self-replenishing sustainable financial mechanism, sustaining long-term coral reef conservation efforts. Unlike traditional funds, it follows a revolving approach, continually replenishing its resources through repayment or reinvestment of generated income. This unique model ensures a perpetual cycle of financial support, fostering the fund's enduring ability to address evolving conservation needs over time. By maximizing the impact of its initial capital, the fund optimizes investments in various conservation initiatives, driving a more effective and sustainable approach to financing. Additionally, CCTFs in each seascape will be the mechanism that ensures the continuity of co-management mechanisms in them. The FEMA as a national forum and its seascape-specific sub-committees are expected to serve beyond the period of the GEF financed project, which can also be supported by the CCTFs. Similarly, the technical capacities built into the CMCs through the CPBSF will sustain beyond the SLCRI programme period. It is expected that, although the CPBSF would not be there after the programme, the role of CPBSF will be taken up by the seascape-specific FEMA sub-committees and the CMCs themselves, towards the end of the SLCRI programme.

In the event that the establishment of the CCTFs confront barriers that cannot be overcome during the programme lifetime, the programme can still achieve its benefits to the coral reefs and associated communities in Sri Lanka. The CPBSF could still get concessional finance from other sources like HSBC and DFCC, while the CMCs and CCGs will still be established providing a foundation for integrated and sustainable resource management in priority seascapes. The Biodiversity Credits and other innovative financial mechanisms could still be pursued and ensure the sustainability of financing the MPA and seascape management and law enforcement.

6 Governance and Management Arrangements

6.1 Programme implementation arrangements

6.1.1 Convening Agent

IUCN Sri Lanka will serve as the Convening Agent of the SLCRI. IUCN Sri Lanka is uniquely positioned as the leader to facilitate the programme, while it will also technically contribute towards the success of the coral friendly investments and initiatives. Management board of IUCN Sri Lanka is already comprised of lead Government agencies including the Ministry of Environment, Department of Wildlife Conservation, Forest Department, and the Department of National Zoological Gardens. IUCN Sri Lanka operates in the country under an MoU with the Government of Sri Lanka equivalent to that of UNDP. Our corporate agenda is described by the theme ‘‘One Nature – One Future’’ and we work on land, water, oceans, climate, and people related challenges.

In the areas related to the vision of GFCR, IUCN SL has been in the forefront of coral reef conservation in the South Asia Region since the 1990s. IUCN Sri Lanka Office helped the South Asia Regional Coordinators of the Global Coral Reef Monitoring Network from 1997 to 2003. Our recently concluded activities include surveys of coral reefs under the Mangroves for the Future Regional Project in the Gulf of Mannar, assessment of marine turtle nesting habitats along the southeastern coast of Sri Lanka in 2018 and coral reef surveys in the Palk Bay and Palk Strait during the biodiversity surveys in the Islands and Lagoons of Northern Sri Lanka in 2016 and 2017. IUCN SL is currently engaged in studying the impacts of nitrogen used in agriculture on exacerbating coral bleaching under the South Asia Nitrogen Hub as well. IUCN SL is also engaged in studying the Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFG) in the Gulf of Mannar and Palk Bay to reduce the damage to coral reefs and pollution by fishing gear. On invitation by the DWC, IUCN SL coordinated the GEF funded Dugong Conservation project where about 10 Government agencies and NGOs were serving as implementing partners.

IUCN SL supported GEF funded 'Managing Together' Project—a 'Ridge to Reef' approach—which contributed to well managed and enforced MPAs that protect and promote healthy reefs in the Gulf of Mannar. In addition, the Norway funded MARESSOL plastic pollution project, GEF funded South Asia Nitrogen Hub, and UNEP funded Counter Measure II project have multiple elements to enrich the SLCRI. Further, IUCN SL together with the Ministry of Environment will implement GEF-funded projects on Natural Capital Accounting and Assessments in coastal and marine environments in three coastal areas in Sri Lanka, which is right at its inception stage. SLCRI priority coral reef sites of Pigeon Island and Bar Reef will be a part of this GEF project, while the said project will co-finance the SLCRI through the establishment and operationalisation of the FEMA. These projects comprise of strong communication and capacity building components that would complement and strengthen the SLCRI programme and help to enhance co-financing.

6.1.2 Key Partners (2-pages max)

6.1.2.1 Co-recipients

IUCN Sri Lanka will be the only direct recipient of GFCR financing.

6.1.2.2 Co-implementers and Partners

Table 7: Co-implementers of the Sri Lanka Coral Reef Initiative

Co-implementer Organisation	Role in Programme
Department of Wildlife Conservation (DWC)	DWC is the mandated government agency in managing marine protected areas and species declared under FFPA. They will play a role in implementing management interventions and facilitating research in Marine Protected areas. In addition, DWC will take the leadership of convening the co-management committee, and its function in the Pigeon Island Seascape. *Outputs 1.1, 1.2, 1.3, 1.4, 2.1, 3.1, 3.2 and 3.3*

Coast Conservation and Coastal Resources Management Department (CC&CRMD)	CC&CRMD is the mandated agency for preparation and implementing Coast Conservation and Coastal Zone Management Plan where they have a provision to declare Special Management Area (SMAs). All three priority seascapes will be declared under the CC&CRMD and Co-management planning process will be institutionally lead by them in all three seascapes. Furthermore, they will play a lead role in designing and managing LMMAs within large seascapes. In addition, CC&CRMD will take the leadership of convening the co-management committee, and its function in the Bar Reef Seascape. *Outputs 1.1, 1.2, 1.3, 1.4, 2.1, 2.3, 3.1, and 3.3*
Department of Fisheries and Aquatic Resources (DFAR)	Declaration of possible fishery management areas in priority seascapes and promotion of sustainable fishery initiatives and livelihood enhancement activities in all three seascapes. In addition, DFAR will take the leadership of convening the co-management committee, and its function in the Kayankerni Seascape. *Outputs 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, and 2.3*
Environmental Foundation (Guarantee) Ltd	Legal and institutional review for creating enabling conditions for effective co-management of priority seascapes. Legal and institutional review on designing Conservation Trust Funds in Sri Lanka and assist setting up three such CCTFs in three priority seascapes. *Outputs 1.1, 1.2, 1.3 and 1.4*
Sarvodaya	Capacity building of FCSs and supporting livelihoods enhancement in all three seascapes. Facilitating co-management arrangements and managing the CCTFs in all three priority seascapes. *Outputs 1.1, 1.2, 1.3, 1.4, 2.1, and 2.3*
Blue Resource Trust (BRT)	Technical inputs to developing coral positive business and coral reef restoration and research support in all three seascapes. Facilitating co-management arrangements in the Kayankerni seascape. *Outputs 1.1, 1.2,1.3, 1.4, 2.1, 3.1, 3.2, and 3.3*
Fishery Cooperative Societies (FCS)	Livelihood enhancement activities and management of revolving funds *Outputs 1.1, 1.2,1.3, 2.1 and 2.3*

**Co-implementers: implementation partners that will receive GFCR financing through IUCN Sri Lanka.*

Table 8: Programme partners of the Sri Lanka Coral Reef Initiative

Programme Partners	Role in Programme
Ministry of Environment (MoE)	Policy level inputs, resource mobilizing and provide leadership for SLCRI
Ministry of Wildlife and Forest Conservation (MoW&FRC)	Policy level inputs, resource mobilizing and provide leadership for SLCRI

Ministry of Fisheries (MoF)	Policy level inputs and resource mobilizing
Universities	University of Ruhuna, Wayamba University of Sri Lanka and Eastern University to be engaged in field level studies and research. University of Ruhuna is expected to take leadership in research on coral reef ecosystem restoration.
Forest Department	Mangrove conservation and management and restoration in all three priority seascape.
National Aquatic Resources Research and Development Agency (NARA)	Technical support on coral reef monitoring and restoration activities
Marine Environment Protection Authority (MEPA)	Pollution control and marine environment management initiatives
National Aquaculture Development Authority (NAQDA)	Feasibility studies and promotion of sustainable aquaculture
Sri Lanka Tourism Development Authority (SLTDA)	Promotion of ecotourism and other forms of sustainable tourism in all three priority seascapes.
Ceylon Chamber of Commerce (CCC)	Leveraging local investment for coral positive business ventures
Federation of Chambers of Commerce Industry in Sri Lanka (FCCISL)	Supporting Small and Medium Enterprises (SMEs) and businesses at seascape level.
Sri Lanka Coast Guard	Assist DWC on law enforcement in priority seascapes
Colombo Port City; HSBC Bank; DFCC Bank	Expected to co-finance and/or invest in SLCRI programme pipeline
Pegasus Capital Advisors (PCA - represented by Deliberate Capital)	Liaison with large public funds and high-end investors into tourism, aquaculture and energy sectors supporting investments in three landscapes
Impact Investment Exchange	Facilitate the introduction of private sector and public investors to Project area
Biodiversity Sri Lanka (BSL)	Mobilising the engagement of local corporate sector for investing in SLCRI and participation in effective co-management at all three seascapes Engaging a coalition of CSR contributions of companies on coral research and restoration initiative in Kayankerni seascape.
Centre for a Smart Future (CSF)	Attract local investors by formulating bankable business proposals for SLCRI
Lanka Environment Fund (LEF)	Engage in fisheries-based litter management coordination in SLCRI, and resource mobilisation
National Fisheries Solidarity (NAFSO)	Coordination of small-scale fisher community for sustainable fisheries in all three seascapes
Ocean Resource Conservation Association (ORCA)	Coral reef monitoring and restoration work in Bar Reef
Derana Macro Entertainment	Electronics and printed media campaign on Coral reef conservation

** Programme Partners: other partners that will provide in-kind implementation support*

6.1.3 Governance and Operational structure

SLCRI will be governed by a National Steering Committee (NSC) co-chaired by the Secretary to the Ministry responsible for wildlife conservation, as all MPAs in Sri Lanka are managed under the purview of the Fauna and Flora Protection Act (FFPA), enforced by the DWC, which will fall under the above ministry, which currently is the Ministry of Wildlife and Forest Resource Conservation and Ministry of Environment. The NSC will provide overall guidance to the programme. The Steering Committee will be comprised of representatives from the Ministry of Environment, Ministry of Finance and Planning, Ministry of Provincial Councils and Local Government, all relevant Government departments (DWC, CC&CRMD, DFAR, FD) and authorities (SLTDA, MEPA, NARA, NAQDA), Sri Lanka Coast Guard, IUCN Sri Lanka as the GFCR convening agent, and all co-implementers (e.g. BRT, EFL, CSF, LEF, Sarvodaya, etc.), representatives from the FEMA operationalized under the GEF funded NCAA project implemented by the MoE, as well as representatives from seascape-specific CMCs and CCTFs managers. IUCN Sri Lanka will be represented in NSC by the Country Representative, who will play a senior advisory role of the SLCRI programme. The FEMA will provide technical advice and guidance to the NSC in addition to individual experts appointed on scientific merit. IUCN SL as the GFCR convening agent for the SLCRI programme, will seek decision support and report to the NSC, while the steering committee will provide necessary direction and monitor the progress of the programme implementation.

The Programme management unit (PMU) will be established in IUCN Sri Lanka under the guidance of the NSC to implement the SLCRI. The PMU will comprise full-time as well as part-time staff. The PMU will be led by a project manager (PM) under the supervision of IUCN Sri Lanka Programme Coordinator. The project manager will be located in the IUCN Sri Lanka office and three site managers will be based at respective seascapes. Three site managers directly report to PM while technical experts, consultants and experts attached to the CPBSF will directly work with three site managers under the guidance of PM. Three project assistants will also be stationed in three-site offices and report to site managers for site level project implementation.

PMU will be supported by a senior coral reef expert and communication experts on a day to day basis to ensure the quality of programme implementation, including environmental and social risk mitigation. In addition, a number of technical experts from IUCN, IUCN commissions and outside agencies will support PMU. Business support facilities will be established under the PMU to support site-level CMCs to support coral-friendly business and reef related businesses. Fulltime and part time experts will be recruited to the CPBSF, including national level experts and academia in relevant disciplines in order to help the project manager with technical matters related to the innovative and blended finance mechanisms and business models of the programme.

The seascape field manager will implement the programme in each seascape with all seascape-specific implementing partners. Co-management committee established in each seascape with representation from all the Government technical agencies related to the coastal and marine sector, INGOs, NGOs and CBOs, and the private sector including financial institutes, corporates, SMEs and MSMEs as well as the academia and research institutes will be the governing body of SLCRI in each priority seascapes. They will be supported by the seascape specific sub-committee of FEMA and the CPBSF in innovative and blended financial mechanisms to support coral reef conservation, while transforming and enhancing the livelihoods of coral-dependent communities. The lead implementing partner of the co-management committee can vary according to each partners advocacy at each seascape, while the DWC, CC&CRMD and the DFAR have currently been identified to lead the CMCs respectively in Pigeon Island, Bar Reef and Kayankerni seascapes, while all three Departments should always be in all three CMCs. It should also be

noted that the seascape CMCs will be represented at the NSC and they should present the ground level implementation progress of SLCRI at each NSC meeting, together with the seascape-specific CCTF management representative.

Project manager based at IUCN SL will allocate grant funding for each seascape co-management committee and monitor/audit the implementation of co-management plans at each seascape. Seascape field managers will be responsible for the implementation of the programme in each seascape according to pre-determined workplans and report to the project manager.

The proposed institutional arrangement for the effective implementation of SLCRI is illustrated in the diagram below;

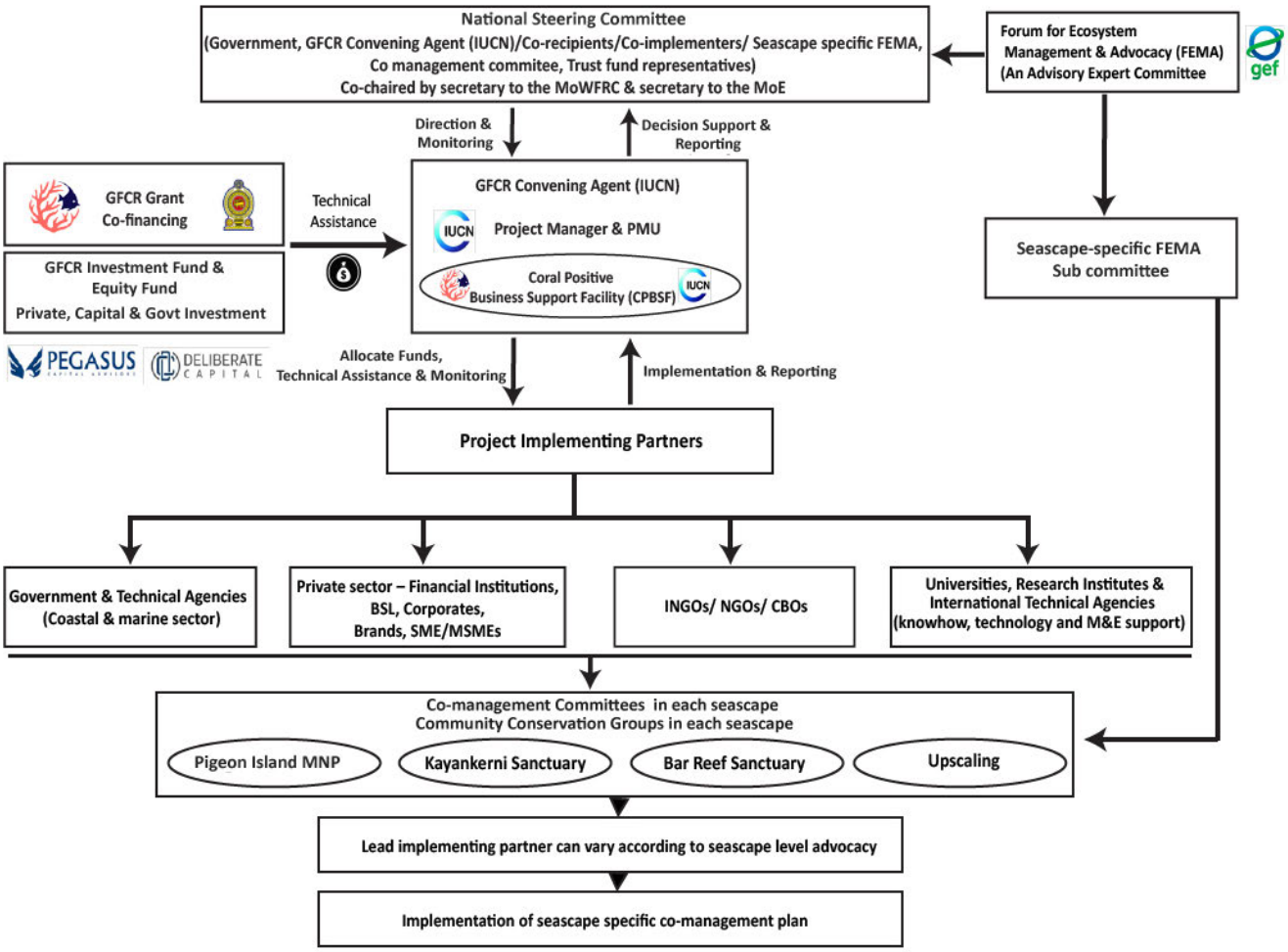


Figure 7. Proposed institutional arrangement for effective implementation of Sri Lanka Coral Reef Initiative

This programmatic structure will ensure coordination and proper implementation mechanisms with key stakeholder organizations at the national and local level throughout implementation. The initiative will work closely with CMCs at site level to ensure smooth programme implementation with local stakeholders

and communities, while ensuring monitoring and information flowing across all levels from the NSC to site level fisher communities.

While many actors will be engaged throughout the SLCRI programme, IUCN is confident that decisoin making and coordination can be efficent and well managed. This is due to the nature of IUCN being a union of members from government, civil society and individual experts with proven convening power globally, regionally as well as locally. IUCN Sri Lanka has a well established reputation among the government, non-government, private sector and academic stakeholders through implementing, and coordination numerous national scale initiatives over the last four decades, which will provide us the convening power needed to successfully implement the SLCRI.

6.2 Country ownership

6.2.1 Government engagement

Government engagement at both the national and sub-national levels played a vital role in the development of SLCRI proposal. This aimed to understand ongoing government and sub-national level initiatives, societal challenges and baseline information required to create a positive change. The key purpose of this engagement is to foster collaboration, harness expertise and ensure the alignment of proposed programme with government policies and initiatives.

At the national level, a National Advisory Committee (NAC) was established to provide expertise, advice and to support for cohesive decision-making during the proposal development process including site prioritization, developing technology, financial and social improvement models. This committee comprised representatives from nine key government organizations such as Ministry of Wildlife and Forest Resources (Co-Chair), Ministry of Environment (Co-Chair), Ministry of Fisheries and Aquatic Resources, Central Bank, Department of Coast Conservation and Coastal Resources, Sri Lanka Tourism Development Authority, Ceylon Fisheries harbour Cooperation, National Aquatic Resources Agency (NARA) and Marine Environment Protection Authority (MEPA). Furthermore, private sector participation was also encouraged for the NAC through Biodiversity Sri Lanka which brought together more than 90 private sector entities committed to environmental conservation. The multi-sector engagement and diverse perspectives of NAC team enriched the proposal by integrating a wide range of insights, contributing to holistic planning.

At the sub-national level, collaboration extended to district and divisional secretariat officials in specific areas such as Bar Reef, Kayankerni and Pigeon Island. The Divisional Secretaries, Planning Directors, Administrative Heads, and field officers (Economic Development Officers and Environment Development Officers) provided valuable insight into local conditions, tailoring the proposal to the unique needs of each area. Going beyond engagement solely with administrative bodies, the involvement of regional authorities who engaged in ground level implementation further broadened the scope of collaboration. These regional authorities include the Department of Fisheries, tourist boards, coast guard and naval base officials.

Throughout this national and sub-national level stakeholder engagement process, several champions emerged, serving as catalysts for the project implementation. A few of these champions who will provide leadership during the co-management plan implementation include the Department of Wildlife Conservation for the Pigeon Island and Department of Fisheries and Aquatic Resources for Kayankerni,

and the Coast Conservation and Coastal Resource Management Department for the Bar Reef. Regardless of who leads the co-management committee, DWC will have their jurisdiction within the MPAs, and DFAR in FMAs while CC&CRMD in entire seascapes which will be declared as SMAs under their jurisdiction. The primary role of these champions during the implementation will be to advocate the resources, facilitating cross-sectoral coordination and to ensure the quality of ground level implementation. However, there is also potential to emerge other champions during the project implementation. According to the project design, the regional level government organizations including local governments, fisheries cooperative societies and other CBOs will also serve as champions.

In conclusion, government engagement both at national and sub-national levels, has proven to be a driving force in proposal development and execution. Through vibrant discussions, participation of officials, and the commitment of champions, the proposed initiatives assured to achieve meaningful impact on socio-economic growth, environmental protection, and disaster resilience of selected three priority seascapes of the project.

6.2.2 Programme consistency with national priorities and plans

The proposed programme addresses the government policies and plans by directly addressing key indicators and targets outlined in the National Environment Action Plan (NEAP) for 2022-2030 aligning with the National Environment Policy. Additionally, the programme strategy is in harmony with the National Biodiversity Strategic Action Plan (NBSAP), also aligning with the United Nations Sustainable Development Goals (SDGs). Furthermore, the programme supports achieving Nationally Determined Contributions (NDCs) to the United Nations Framework Convention on Climate Change. The National policies and action plans aim to achieve following goals related to GFCR vision.

Alignment of the programme with National Environment Policy Goals

The National Environment Policy (NEP) indicates that achieving sustainable development depends on wise and responsible management of country's environmental resources. The environmental resources of the country comprise of a rich base of fertile land, a sizeable endowment of freshwater and marine aquatic resources, a diverse range of ecosystems housing numerous species, a variety of mineral resources and groundwater and abundant sources of hydro, solar and wind energy. The solutions identified in the programme contributes to achieve a significant portion of the following two goals of NEP;

1. Essential conditions for a sustainable 'blue economy' will be fulfilled by strengthening safeguard measures and investments to ensure conservation and sustainable use of coastal and marine resources of the country.
2. Innovative practices of green development and production such as eco-friendly agriculture, resource-efficient cleaner production, green building, eco-tourism and nature-based tourism will be mainstreamed in key economic sectors such as agriculture, industry, construction, transportation, tourism and energy.

Indicators/Targets assisted by the programme are:

•Development of Integrated coastal and marine resources management plans to optimize economic benefits while minimizing negative impacts on the environment.

•Development of criteria for identifying critical ecosystems, establishment of co-management systems for sustainable resource use, management, and protection.

Alignment of the programme with National Priorities mentioned in National Environmental Action Plan (NEAP) to achieve by 2030

The programme directly addresses several NEAP indicators and targets related to the co-management plan development for MPAs, promotion of sustainable tourism, regulations for fisheries activities and

coastal and marine ecosystem restoration. The DWC, MEPA and CC&CRMD will be responsible for achieving these targets and this programme will assist these key stakeholders. Moreover, with the support of GFCR grant, CC&CRMD has already initiated stakeholder consultations to update the National Coast Conservation Plan.

Indicators/Targets assisted by the programme are:

•Protection of Marine Protected Areas (MPAs) and Fisheries Management Areas (FMAs): Project will contribute to management of 03 MPAs out of 27 MPAs planned in NEAP

•Develop and promote community-based and nature-based, sustainable tourism contributing to biodiversity conservation and economic enhancement of coastal communities

- Restoration of 6,000 m^2 of coral; 10.5 ha of mangrove by MEPA. Restoration of 1,000 ha of mangroves by FD.
- Implement regulations for whale and dolphin watching activities to minimize stress on these animals: 10 awareness creation programmes for stakeholders conducted. MOUs with all tour operators established. Monitoring reports obtained.

Alignment of Programme with Nationally Determined Contributions (NDCs) to UNFCCC

Sri Lanka was ranked second in the world in Global Climate Risk Index (GCRI) in 2018[21]. Sri Lanka's Nationally Determined Contributions (NDC's) cover several key areas important for the SLCRI while aiming to achieve its Carbon Neutrality by 2050. In the NDCs Sri Lanka commits;

➢ To achieve 70% renewable energy in electricity generation by 2030

➢ To achieve Carbon Neutrality by 2050 in electricity generation

➢ No capacity addition of coal power plants

Furthermore, the programme aligns with specific NDCs in Fisheries and Coastal/Marine sectors. It adopts an ecosystem-based approach to fisheries management, diversifies fisherfolk livelihoods, conducts research on aquatic resources and identifies priority coastal and marine natural areas to build climate resilience.

Indicators/Targets assisted by the programme are:

Fisheries Sector

• NDC 1: Ecosystem-based Approach to Fisheries Management (EAFM): Adoption of EAFM in climate-vulnerable areas to enhance resilience.

• NDC 6: Diversification of Fisherfolk Livelihoods: Building resilience to climate change through livelihood diversification.

• NDC 7: Conduct of Fisheries and Aquatic Resources Research: Enhancing resilience through research.

Coastal and Marine Sector

- NDC 4: Identification and Declaration of Priority Coastal and Marine Natural Areas: Building climate resilience in high-priority areas.

Alignment of Programme with National Biodiversity Targets of National Biodiversity Strategy and Action Plan (NBSAP)

Sri Lanka has identified a number of national biodiversity targets and strategies and some of the targets aligned to protect coral refugia are;

- Developing fisheries (marine and inland) in an ecologically sustainable manner
- Restoring the coastal zone, by conserving its natural resources and thereby minimizing vulnerability to natural hazards
- Using soft engineering solutions such as habitat restoration to stabilize eroding coastal stretches

[21] www.germanwatch.org

- Promoting environmentally friendly fishing practices
- Preventing coastal and marine pollution

Additionally, Sri Lanka has already launched following **major initiatives** which are very much in line and supporting for the GFCR principles **to protect coral refugia**;

- 'Colombo Declaration on Nitrogen Management' to halve nitrogen waste by 2030
- Banning agro-chemicals and chemical fertilizer (reversed in April 2022)
- Promoting organic fertilizer and farming
- Banning single-use plastics and designing an extended producer responsibility - EPR
- Promoting E-mobility and circular economy

6.3 Community engagement including Indigenous People (IPLCs)

The SLCRI programme places a strong emphasis on involvement and benefits of local communities throughout its implementation. However, the indigenous people are not living in the selected seascapes. This approach is designed to ensure that the voices and needs of these coral-dependent communities take a prominent role in the decision-making process. This not only creates a sense of ownership and empowerment but also ensures the programme's effectiveness and sustainability.

To identify the current condition of these communities a series of comprehensive consultations has been undertaken and these discussions are intentionally diverse in scope targeting a diverse range of community segments. These community segments included fisheries cooperative societies, hoteliers, micro, small and medium enterprises (MSMEs/ SMEs) operating in coastal areas, coral-dependent communities, women representatives, tour operators, homestay owners and migratory fisherman from Bar Reef, Kayankerni and Pigeon Island seascapes.

Importantly, the strategy of this programme is rooted in a bottom-up approach, characterized by a deep respect for local knowledge, values and cultural norms. This approach is complemented by the scientific and technical expertise of the FEMA and CPBSF, to ensure credibility and consistency to the program's objectives. This collaboration not only enhances the program's effectiveness but also sets the stage for PPPPs and the emergence of community-driven innovative businesses and green job opportunities.

This community engagement approach is structured, encompassing a blend of mechanisms to ensure understanding of community needs and expectations. Fisher corporative societies, other CBOs and community leaders will essentially be part of the CMCs of each seascape. Community Conservation Groups (CCGs) will be established for each seascape for communities to work together with coral positive business ventures and best practices, as a key part of this approach. Continuing discussion with communities will be conducted during the implementation phase, using different modalities such as structured questionnaires, one-on-one meetings, and small group discussions. These interactions serve as a vital channel for local voices to be heard and taken into consideration in the decision-making processes, in CMCs.

A significant aspect of the engagement process is the involvement of fishermen in baseline assessments. Beyond their traditional roles, these community members have actively contributed by collecting water and soil samples. This level of participation not only contributes to the program's data collection efforts but also informs a profound understanding of the significance of safeguarding marine ecosystems. By actively involving local stakeholders in data collection and research, the program bridges the gap between

theoretical concepts and tangible, lived experiences, fostering a deeper connection to the preservation and restoration of their environment.

In essence, the program's approach to community engagement extends beyond marked consultation; it seeks to create a dynamic ecosystem of collaboration, where local communities are true partners in the journey toward protecting coral refugia. By incorporating diverse perspectives, fostering innovative partnerships, and facilitating knowledge exchange, the program sets the stage for a more holistic and impactful conservation and development effort.

6.4 Coordination with other initiatives

The SLCRI programme is committed to marine conservation and the development of a sustainable blue economy, working towards a future where ecological balance and economic prosperity coexist harmoniously. Leveraging a Theory of Change framework, we aim to address pressing challenges that threaten coral reef ecosystem while unlocking opportunities for local communities and businesses. In doing so, we believe in co-management as the most important solution and hence our approach of coordination with existing initiatives and potential partners would be pivotal for the success of the project. We aim to collaborate with all actors in three priority seascapes and exchange knowledge, in order to magnify the programmeʾs impact.

The Blue Resource Trust currently working to understand factors affecting the resilience of coral reefs to coral bleaching and climate change in eastern coast, as well as the links between Seagrass meadows and food security in northwestern coastal areas, will be made an implementing partner of the programme, together with links to the Tokyo Cement, the Sri Lanka Navy, WRCT, and the Foundation of Goodness for Coral Conservation, particularly in seascapes of Pigeon Island National Park and Kayankerni Sanctuary. Similarly, the EFL who worked with the European Union-funded COLIBRI project to protect, preserve, and restore biodiversity clusters in Sri Lanka, especially the coral reefs in north-west will be partnering the programme in the bar-reef seascape. Existing management plans which have been developed over the past for the MPAs in the three seascapes by various agencies including the DWC and the ones mentioned above will be built-in to the seascape co-management plan.

IUCN implements the GEF7 Natural Capital Accounting and Assessments in coastal and marine environments project in the coastal and marine sector. While the GEF7 investment will generate information and advocacy material for coastal region fisheries and tourism areas, the project will co-finance the SLCRI through the establishment and operationalisation of FEMA. Further, the CEA and the MEPA are engaged in pollution control in marine areas, together with several private and non-government agencies. All such agencies will be coordinated in various possible ways during the implementation and co-financing the SLCRI. For example, the LEF, BSL and CSF will be coordinated with SLCRI for potential technical support and co-financing; LEF intends to provide co-financing for SLCRI through small grants safeguarding the fragile coastal reef ecosystems, strengthening civil societyʾs capacity to promote sustainable use of natural resources and to improve local community livelihoods. BSL is a coalition for environmental conservation among the corporate sector intends to bring in cooperate partners from the private sector, including banks to finance coral reef conservation and restoration in selected seascapes.

OCPPʾs work on MPAs will have direct relevance to the SLCRI as they would work towards sharing best practices in MPAs across the world, while their MPA management guidelines, especially in BRS and the PIMNP will provide a baseline for larger seascapes co-management plans. SLCRI plans to implement the Management Effectiveness Tracking Tool (METT) in the three priority seascapes while the OCCP is already

in the process of training the DWC officials to implement the METT in the MPAs, making a clear synergy between the two programmes. Their support to the Government in the national marine spatial plan, and the national blue carbon habitat map would also provide important insights to the SLCRI, and hence discussions with OCPP have already been initiated during the SLCRI preparation. Furthermore, the SLCRI will collaborate with the GEF funded BOBLME project in order to bring resources to coastal zone management in proposed seascapes in the Eastern coast of Sri Lanka.

In addition, the programme may coordinate with the past projects such as the ones given below to learn from them;

- COLIBRI project implemented by the EFL together with BRT and the Green Movement Sri Lanka (GMSL) on 'Community Livelihood and Biodiversity Recovery'. This is a European Union funded project. In this project EFL and BRT are conducting marine-based projects in the BRS and the KS.
- The SLCRI will work with MEPA on the GEF funded N-Hub project by the UK Centre for Ecology & Hydrology to quantify Nitrogen Loads to the Ocean where IUCN will help in the field work and load estimations using the US Army Corps FLUX model.
- Commonwealth Scientific and Industrial Research Organisation (CSIRO) Australia conducted initial consultations on possible strengthening of scientific research related to mangrove ecosystems and conducted a workshop in October 2019. CSIRO plans to aid the Government in quantification of mangrove areas and to develop research programmes. The project will provide map information on the coastal and marine region that would be used in SLCRI seascape delimitation.

The UNDP- BIOFIN project helped the Central Bank of Sri Lanka to develop a "Sustainable Financing Strategy for the Banking Sector" where it highlighted "Green Bonds", "SUS certification scheme, and other financial tools. The SLCRI programme would benefit from this project's Sustainable Financing Strategy with field level information.

6.5 Stakeholder mapping & engagement plan

Effective stakeholder engagement stands as a key component built to drive SLCRI programme towards the success. This engagement plan provides insight into the dynamic interactions and the depth of engagement with stakeholders. Moreover, it emphasizes engaging stakeholders throughout the spectrum of programme governance, implementation, monitoring and reporting.

The design of SLCRI program unfolds as a unique approach that links both the bottom-up and top-down approaches through PPPPs.

In this collaboration, the bottom-up approach is primarily led by the private sector, CMCs and CCGs which includes CBOs and Fisheries Cooperative Societies. These entities are guided by the technical expertise of the seascape specific FEMA sub-committees and the CPBSF when necessary. Notably, co-management committee assumes a central role, backed by financial, investment, technical and business support from GFCR grant, private sector and impact investors. This stakeholder engagement plan is developed to foster a sense of shared ownership, where local communities and external partners join forces to strengthening protection of coral associated priority seascapes of Bar Reef, Kayankerni and Pigeon Island MPAs along with their coral reef clusters. Simultaneously, a top-down approach is led by the FEMA and CPBSF along with the Government agencies. This collaboration focused on providing high-level guidance on programme governance, implementation designs and monitoring frameworks. This hybrid arrangement will be helpful to propel the programme towards comprehensive transformation, resonating with a cohesive progress. Furthermore, this stakeholder engagement mechanism will create a diverse array of business ventures, fostered by innovations and cutting-edge technologies with the engagement of

universities and other research institutes. The programme is designed to emerge the investors as a catalyst for change by advancing the broader objective of the GFCR.

Selected stakeholders including NAC, FEMA and a few investors and local representatives will be invited to the project inception phase, following the established pattern of consultations and dialogues during project preparation. Additionally, the seascape level consultations and one to one discussion with various segments which were initiated during preparatory phase will continue in the three seascapes. The project's communication and awareness management strategy will ensure a common understanding of the project's objectives, outcomes and community mobilization approaches to achieve them. As the project progresses, new stakeholders including local and international investors and private sector entities will be identified. Stakeholder engagement is open-ended and it's expected to contribute to adaptive management of the project. Regular (at least quarterly) joint individual meetings will be held with stakeholders not routinely involved in project interventions. Programme staff will focus on listening, accepting differences and building mutual trust throughout the project, challenging assumptions through dialogues. As the SLCRI embark on this transformative change, the stakeholder engagement plan will further expand by inviting stakeholders from all corners to build collaborations and shared aspirations.

Annex VI lists all the key stakeholders, their mandate, responsibilities, and level of engagement with the SLCRI programme, together with mapping of the level of interest and influence of different stakeholder categories; (a) local communities, (b) local policy makers and authorities, (c) NGOs and International organisations, (d) private sector and (e) Government authorities on SLCRI. The project design outlines how the stakeholders will be informed, consulted, included in participatory planning, and how they will be involved in screening potential project interventions while assuming specific responsibilities as part of the overall programme. Additionally, the graphical representation provided in Annex VI provides an insight into the level of interest and influence of different stakeholder categories engaged in the programme and the Table 1 of Annex VI summarises their engagement with solutions of SLCRI. The seascape field manager will be responsible for the engagement of local level stakeholders and the project manager will be responsible for networking other key stakeholders including the Government, NGOs, private sector and investors.

6.6 Awareness building and communications

The overarching objective of the communications and awareness building is connecting all SLCRI stakeholders around the programme objectives. The main objective of the awareness building and communication strategy for SLCRI is to develop a sound understanding of all stakeholders about importance of coral reefs, threats which coral reefs are facing, their value for the development and sustainability of livelihoods and the importance of conserving coral reefs, especially in priority coral reef sites. In order to achieve programme outcomes, its communication and awareness component is segregated below into specific communication related objectives to better target the different segments.

These objectives are;

i. National level stakeholders mainstreamed into coral reef conservation and restoration at policy level, and also to promote concept of co-management in seascape level.
ii. Stakeholders involved in co-management in seascapes, are made aware to facilitate implementation of co-management plans at seascape level with a multi-stakeholder approach and sustainable financing mechanisms.
iii. All community stakeholders empowered and motivated to conservation of priority coral reefs by eliminating unsustainable and destructive activities.

The first two objectives are necessary as effective co-management is a pre-requisite for the success of SLCRI, which creates the enabling environment for the growth of reef-positive business and create the necessary ground for attracting investment. Furthermore, the range of stakeholders in the SLCRI is wide and diverse; they range from policy level to community level, also with corporate sector organizations. In addition, we have law enforcement entities, resource management agencies and also destructive resource extraction groups. As such, a multi-fold communication strategy that incorporates various innovative communication tools are needed to convey the intended messages. In order to identify the most suitable mode of communication, it is vital to identify target groups and the role each group may play in the communication framework.

A common method of identifying target groups is to carry out a stakeholder analysis. Accordingly, a stakeholder analysis was carried out to identify the key players in the national, regional and community level. They were then segmented based on the power and influences gradients, graded into four categories and mapped into a matrix taking into consideration the below table.

Sri Lanka Coral Reef Initiative target group categorization for communication

Promoters	Target groups who have high influence to coral reefs, and who have a significant interest in the activities listed in the SLCRI;
Defenders	Target groups who have little influence to coral reefs, but who are significantly interested in the activities listed in the SLCRI;
Latents	Target groups who have high influence to coral reefs, but who have little interest in the activities listed in the SLCRI;
Apathetics (By-standers)	Target groups who have little influence on coral reefs, and who have little interest in the activities listed in the SLCRI as well.

The awareness-building and communication activities of SLCRI will strategically focus on different stakeholder groups with suitable communication tools, including the use of a mass media television channel. These communication activities will ensure multi-stakeholder engagement with different societal strata at local, national, and international levels while disseminating the lessons learned among the interested parties. In this context, the SLCRI aims to effective communication methods and tools such as education and awareness programmes, case studies, feature and scientific articles, social media posts, sharing best practices, national and international events, frequently published newsletters, general communications, etc., in compliance with the objectives of the programme. Further this includes some of the key communications aims required by GFCR, including programme/solution case studies, articles, social media posts, human interest stories, events, newsletter content quarterly, and general communications assets (videos, infographics, etc.).

6.7 Gender mainstreaming considerations

At a national level, Sri Lanka is yet to initiate concrete steps towards gender equality and women's empowerment. In June 2023, Sri Lanka ranked 115th out of 146 countries in the Global Gender Gap Report[22], with a backslide of five ranks from the previous position that the country occupied (110th rank in both 2022 and 2021). Indicator-wise, although the country achieved relatively higher scores on health and education, economic participation score was moderate while the political empowerment score was very low.

[22] World Economic Forum. June 2023. Global Gender Gap Report 2023. Geneva, Switzerland. https://www3.weforum.org/docs/WEF_GGGR_2023.pdf

SLCRI acknowledges the lack of data and contextual indicators on women's and men's dependency on the coral reefs at the three seascapes of priority focus. The Initiative's situational understanding is therefore primarily based on the available gendered accounts of coastal and fishing communities in Northwestern and Northeastern regions at a broader level.
An initial gender analysis and a draft Gender Action Plan aligned with the programme outcome-output Framework is provided in Annex IX.

Following are the key gender mainstreaming considerations for SLCRI:

- Adopt a gender-transformative approach[23] throughout the project cycle from design to implementation and closure[24]
- Embed a gender-disaggregated approach within the project's overall data collection, analysis, and M&E activities, using both quantitative and qualitative contextualized indicators (within this, efforts will also be made to capture other factors that intersect with gender such as demographic characteristics and race to develop an in-depth understanding of local realities and circumstances[25])
- Closely engage with local stakeholders from across community, private, public, and non-government sectors, both informal and formal partners including organizations (e.g., fisher cooperatives, women's associations, networks), NGOs and other development partners (e.g., Blue Resource Trust), and local level government administrative authorities (e.g., DFAR).
- Meaningfully include both women and men in community-level planning and decision-making activities with a 40% target at minimum for women's representation
- Ensure activities that target all three domains through which gender equality can be advanced within coral reef-dependent communities: build agency, change relations, and transform structures[26]
- Assign a gender marker GM2 as the minimum requirement on output level
- Contribute to develop gender-sensitive policy and management guidelines for coral reefs and ensure alignment with other relevant global, national, and sub-national level regulations and guidelines (e.g., FAO's Voluntary Guidelines for ensuring sustainable small-scale fisheries[27])
- Regularly update gender analysis and the initial draft Gender Action Plan to strengthen action, add new gender-sensitive contextual indicators, mitigate emergent risks, and build on successes
- Ensure operationalization of GFCR's Gender Policy and IUCN's Gender Policy
- Allocate budget and resources for gender mainstreaming activities
- Develop gender-sensitive communications and stakeholder engagement plans
- Include a gender-inclusive core project management team

[23] Lau, C. & Ruano-Chamorro, C., June 2021, Gender Equality in Coral Reef Socio-ecological Systems: A Literature Review.
[24] Guidance Note: Operationalizing the GFCR Gender Policy. Global Fund for Coral Reefs.
[25] Pacific handbook for gender equity and social inclusion in coastal fisheries and aquaculture. Pacific Community (SPC), 2019. https://coralreefrescueinitiative.org/storage/resource/file/barclay-19-gender-handbook-p5k88.pdf
[26] Lau, C & Ruano-Chamorro, C, June 2021, Gender Equality in Coral Reef Socio-ecological Systems: A Literature Review.
[27] FAO, 2017, Towards gender-equitable small-scale fisheries governance and development: A handbook. https://doi.org/10.18356/e999fb85-en

7 Financial arrangements and procedures

7.1 Overview

Sri Lanka Coral Reef Initiative's vision for 2030 will be met with USD 6 million grant funds from GFCR, out of which about USD 1.5 million will be expected for the phase I. Phase I will heavily rely on grant for creating enabling conditions on ground for effective implementation of the SLCRI. No investment except for co-financing is expected during the phase I of the SLCRI. The investment capital planned for SLCRI is USD 15 million over its programme life (6 years starting in 2024), likely in the sectors of sustainable fisheries, aquaculture and mariculture, ecotourism, renewable energy, innovative financing such as coral reef credits, blue bonds and bioprospecting, which is closer to 1:2 (1:1.88 to be precise) ratio between grant and investment funds. Furthermore, it is expected to bring USD 9 million as co-funding to SLCRI from the government, private sector and NGOs. Expected investment together with co-funding amounts to USD 24 million which makes it 4 times the GFCR grant contribution to the programme. This is rationalized as the country's economy is still far below what it used to be, indicators in the recent past shows that the economy is slowly but steadily getting back on track with the IMF moderated structural adjustments to recover from the crisis.

Table 9: Total Grant Costs (USD)

Source	Grant	Percent deployed as Concessional loan/Recoverable Grant/Guarantee	
GFCR	$ 6,000,000	21%	
Co-financing	$ 9,000,000	10%	
Secured			
Anticipated	$ 9,000,000		
TOTAL (secured)			
		GFCR Grant Co-financing leverage	1:1.5
TOTAL (anticipated)	$ 9,000,000		

Table 10: Leverage potential of GFCR grants (USD)

	Private Sector Investment	Public Sector Investment	TOTAL	GFCR Grant Leverage
Secured				
Ambition	$ 15,000,000 ($ 14 M for Solution 2 and 1 M for Solution 3)	0	$ 15,000,000	1:2.5
TOTAL	$ 15,000,000	0	$ 15,000,000	1:2.5

7.1.1 GFCR Grant Cost Overview by Outcome

Out of the total grant of USD 6 million, roughly USD 4.5 million will be available beyond Phase I of the project where the deployment of part of them in investment is considered. As indicated in the table below rough percentages of investment applicable for each component are provided with overall 21% of the total grant earmarked for investment.

Table 11: GFCR Grant cost by Outcome (USD)

Component	Total GFCR Grant Cost (% of TOTAL)	Percent deployed as Concessional loan/Recoverable Grant/Guarantee
Outcome 1	1,800,000 (30%)	40%
Outcome 2	1,440,000 (24%)	30%
Outcome 3	1,260,000 (21%)	10%
Direct Costs	1,080,000 (18%)	0%
Indirect Costs (7%)	420,000 (7%)	0%
TOTAL	*6,000,000 (100%)*	*21%*

7.1.2 Grant co-financing

There was keen interest demonstrated by all stakeholders to support the programme proposed by the SLCRI as there is no integrated approach to manage the reef associated ecosystems in Sri Lanka in a programmatic approach. Therefore, IUCN has conducted discussions with stakeholders during the programme preparation period on how they could engage with the programme. Those discussions have indicated their willingness to take part in this intuitive. Discussions on co-financing were held and request letters were issued to all potential co-financiers. Their firm commitments will be collected in writing and submitted before the GFCR Executive Board meeting in November 2023.

There is also monetary co-financing like GEF/IUCN project under GEF Cycle 7 on Natural Capital Assessment and Accounting in Coastal and marine areas of Sri Lanka executed by Ministry of Environment for next 4 years. Large investors like Port City Project are considered an ambition for Co-financing. Initial discussions were fruitful and firm commitments are expected in the next couple of months. IUCN had discussions with the CEO of one of the largest media networks with widest distribution and coverage, who expressed interest to give free airtime and space in print media in all three languages used in Sri Lanka. All these will be confirmed as we demonstrate that they see proposal graduation to real project. Therefore, the commitments will become real only during Phase I of the project.

Table 12: Grant Co-financing arrangements (USD)

Co-financing Source	USD	Monetary *or* In-kind	Status	Relevant programme Outcome / output / activity
			Secured / anticipated / ambition	*Example: Alignment w/ Output 1.1, 1.4, 2,2.*
GEF - NCAA project	1.3 M	In-kind & Monetary	Ambition	1.2, 1.3, 1.4, 3.1
OCPP	0.8 M	Monetary	Ambition	1.1, 1.3, 1.4
BOBLME II	0.8 M	Monetary	Ambition	2.1
Department of Wildlife Conservation	0.8 M	In-kind	Ambition	1.1, 2.1, 2.3, 3.1, 3.3
Coast Conservation and Coastal Resource Management Department	0.95 M	In-kind	Ambition	1.1, 2.1, 2.3, 3.1, 3.3
Department of Fisheries and Aquatic Resources	0.8 M	In-kind	Ambition	1.1, 2.1, 2.3, 3.1, 3.3

Sri Lanka Tourism Development Authority	0.75 M	In-kind	Ambition	1.1, 2.1, 2.3, 3.1, 3.3
Ministry of Environment	0.5 M	In-kind	Ambition	1.1, 2.1, 2.3, 3.1, 3.3
Ministry of Wildlife and Forestry Resource Conservation	0.5 M	In-kind	Ambition	1.1, 2.1, 2.3, 3.1, 3.3
IUCN other projects	1.2 M	In-kind & Monetary	Ambition	2.1, 3.1, 3.2
BSL + Private Sector	0.6 M	In-kind & Monetary		1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3
TOTAL	**9 M**			

7.1.3 Commercial Investments

IUCN has been working with potential Sri Lankan entities during the proposal preparation stage raising awareness and demonstrating that SLCRI could bring viable projects for them to use in brokering potential investors. Some of them were well-aware of the GFCR modality and shown keen interest whereas some are sceptic. Impact Investment Exchange (IIX) is one such entity that have links with the PCA and International Institute for Environment and Development (IIED) is another with whom IUCN is currently in dialogue with. We also have had discussions with PCA (represented by Deliberate Capital) when they visited Sri Lanka to explore potential for investments in coastal aquaculture/mariculture, preliminary ideas on mariculture in Trincomalee district (where the Pigeon Island Landscape is) with Oceanpick Pvt Ltd. There were other initial ideas such as Atman Group's interest on seafood, leisure, and energy in coastal areas. In addition to above mentioned entities, initial discussions/consultations have been already conducted with IUCN HQ and Regional Office in making connections with right parties. There were number of Sri Lankan initiatives including Lanka Impact Investment Network and Centre for Smart Future (CSF) etc. Furthermore, discussions with HSBC and DFCC Banks are also likely to invest on SLCRI, as both those entities are GCF accredited private sector entities for concessional loans. The IUCN team is also working closely with discussion on Marine Spatial Planning for Sri Lanka leading to potential Blue Bonds like in Belize. These investments are expected for the solutions 2 and 3 as the solution 1 is expected to be coverd mainly by grant funds and funds generated through the 'user fees' and contributions from all revenue genration activities for the CCTF, as described in the section 4.2 on 'Solution 1.

Table 13: Private Sector Co-financing (Commercial Investments)

Relevant Programme Solution	Source of Invest. Capital	Category	Amount (USD)	Status *Secured / anticipated / ambition*
Solution 1	N/A			Ambition
Solution 2 & 3	DFCC	Loan		Ambition
Solution 2 & 3	HSBC	Loan		Ambition
Solution 2 & 3	Pegasus Capital Advisors (Deliberate Capital)	Equity		Ambition
Solution 2 & 3	Impact Investment Exchange	Equity		Ambition

Solution 2 & 3	Biodiversity Sri Lanka	Equity		Ambition
Solution 2 & 3	Centre for Smart Future	Equity		
Solution 2 & 3	Colombo Port City	Equity		Ambition
Solution 2 & 3	Macro entertainment/ TV Derana	Equity		Ambition
TOTAL			15 M	

It is expected that as the SLCRI proposal gets to the next stage they will seriously consider engaging in the SLCRI's programme pipeline. The pipeline will be developed during the Phase I with dedicated staff on financing and 'investing in nature' working under the CPBSF to be established at IUCN.

7.2 Work-planning

The work plan for the first 18 months of the SLCRI programme has been developed on the GFCR template and provided electronically as the ANNEX II of this proposal. However, the milestones that have been set for the first 18 months of the programme are given below, against each output of the programme.

- **Outcome 1 – Strengthened protection of coral associated priority seascapes in Sri Lanka.**
  - Output 1.1**:** Three co-management plans are operationalized at Bar Reef, Kayankerni and Pigeon Island seascapes**.**
    - Bar Reef, Kayankerni and Pigeon Island seascapes are legalised as Special Management Areas under the the Coastal Zone and Coastal Resource Management Plan (CZ&CRMP) of Sri Lanka.
    - Co-Management Committees (CMCs) are established and operationalised in Bar Reef, Kayankerni and Pigeon Island seascapes.
    - Co-management plans are developed and through CMCs for Bar Reef, Kayankerni and Pigeon Island seascapes.
    - At least one LMMA has been identified and managed through the CMCs in each seascape.
  - Output 1**.**2 – CORALL Conservation Trust Funds and blended financing for coral reef conservation are established to strengthen the operationalization of three co-management plans in Bar Reef, Kayankerni and Pigeon Island seascapes**.**
    - Legal and Institutional review on Conservation Trust Funds is completed and management arrangements to enable CTF establishment are identified.
    - CORALL Conservation Trust Funds for the Kayankerni seascape is established and integrated into the co-management arrangements.
  - Output 1**.**3 **–** Macro and replicable site level innovative financing mechanisms are explored and piloted for coral reefs and community resilience in three priority seascapes in Sri Lanka.
    - Feasibility of innovative financing mechanisms in each seascape is studied and recommendation made for Phase II.
  - Output 1**.**4 **–** A mechanism for measuring management effectiveness established in three priority seascapes in Sri Lanka**.**
    - Management Effectiveness Tracking Tool **(**METT**)** is adopted and established in Bar Reef, Kayankerni and Pigeon Island seascapes**.**

- **Outcome 2 – Transformed livelihoods of coral reef-dependent communities through coral–positive entrepreneurships with enhanced recovery from shocks in coral associated priority seascapes in Sri Lanka.**
    - Output 2.1 – Reef positive livelihoods and business opportunities are implemented at Bar Reef, Kayankerni and Pigeon Island seascapes.
        - At least three reef positive businesses are in place one each at Bar Reef, Kayankerni and Pigeon Island seascapes.
    - Output 2.2 – Regional Cooperation Mechanism (RCM) established to promote coral friendly businesses and share best practices between Sri Lanka and Maldives.
        - A Regional Cooperation Mechanism (RCM) for coral friendly businesses between Sri Lanka and Maldives is in place.
    - Output 2.3 – Enhanced recovery of coral reef-dependent communities from major shocks in coral associated priority seascapes in Sri Lanka.
        - A study on the vulnerabilities reef-dependent communities face when businesses are affected by major shocks is completed in each priority seascape.
        - Coral-dependent communities are linked with the existing government disaster risk reduction mechanism through the relevant Divisional Secretariats
        - Steps taken to extend government disaster risk reduction mechanism to include major shocks in coral associated priority seascapes.
        - Plans are developed for impact mitigation from major shocks through risk and opportunity mapping and study on past experiences of reef-dependent communities and businesses.

- **Outcome 3 – Improved research and development capabilities in coral reef restoration in Sri Lanka.**
    - Output 3.1 – Conditions for scientific coral reef restoration enabled in Sri Lanka.
        - A National Policy Frameworks and Strategic Guidelines for Coral Restoration are available.
    - Output 3.2 – Restoration technologies developed and piloted in coral associated seascapes in Sri Lanka.
        - Three feasibility study reports on coral restoration technologies are available, one each for the three priority seascapes.
        - Three reports on strategies recommended for reef restoration and novel techniques in coral propagation in Bar Reef, Kayankerni and Pigeon Island seascapes are available.
    - Output 3.3 – Degraded coral reefs restored in Bar Reef, Kayankerni and Pigeon Island seascapes with private sector partnerships and upscaled into other similar seascapes.
        - Three degraded coral reef areas identified for piloting reef restoration in each priority seascape.
        - A private sector-led coral reef restoration project is in place at the Kayankerni seascape.

8 Risk management

Table 14: Risk management Matrix

Risks	**Risk Level:** Very high - 25 High - 16 Medium - 9 Low - 1 (Likelihood x Impact)	**Likelihood:** Almost Certain - 5 Likely - 4 Possible - 3 Unlikely - 2 Rare – 1	**Impact:** Extreme – 5 Major - 4 Moderate - 3 Minor - 2 Insignificant - 1	**Mitigating measures**	**Responsible Unit/Person**
Contextual risks					
Political insecurity	Medium	Possible	Moderate	SLCRI is designed with the engagement of all stakeholders through a thorough consultative process at every stage of the project. All activities are supported by local communities and co-management is with local stakeholders, even with a political insecurity SLCRI will have limited impacts as it is very decentralized and people own affair. IUCN will work closely with local implementers to ease the burden of such insecurities through alternative arrangements.	IUCN
Natural disasters and Climate shocks (short term)	Medium	Possible	Moderate	There are social safety nets proposed to support needy people under the project. IUCN will intervene in any such incidents to ensure the affected parties are sufficiently covered.	IUCN/DWC/CC&CRMD/ DFAR/MoE/MoW&FRC
Climate change (long term)	Medium	Likely	Moderate	Building resilience of coral reefs and associated ecosystems through better ecosystem health will help these systems bounce back for external shocks include climate change. So, the dependents of these systems will also be equally resilient. IUCN together with local Community CMCs take special effort to educate all engaged in reef related activities to do away with destructive activities.	IUCN
Programmatic risks					

Lack of will and support to formulation of a co-management platform as a new management mechanism	Low	Unlikely	Moderate	The concept of co-management has been discussed in detail and key stakeholders agreed to it as the best way forward. There will be further communications on highlighting benefits to all by the proposed activities. IUCN to resolve any conflicts that may arise between stakeholders in implementing the co-management arrangements.	IUCN
The lack of motivation for private sector investment in coral-positive interventions (due to the deteriorating economic condition in the country)	Low	Possible	Minor	SLCRI is expected to provide long-term sustainability that will also help in building back local economies, especially in post-COVID-19 context. GFCR grant is expected to de-risk private sector financing and provide incentives for private sector engagement. Ongoing discussions have increased the confidence that a viable and sustainable coral positive pipeline can be developed through the course of the programme.	IUCN
Progress of the blended financing mechanisms due to the lack of familiarity with the potential and challenges in upscaling	Medium	Possible	Moderate	Emphasis the ability of the approach to bring capital and knowhow at a lower cost and the advantage of un-locking private capital. Align with Govt. initiatives and vision from the inception Involve Government planning, especially the national planning and resource related agencies in project planning and create environment within the project board to play key roles. Engagement of PCA to mobilize large private funds in the developed countries to invest in coral reefs in Sri Lanka	IUCN
Institutional risks					
Mutual lack of trust between state agencies and the private sector is a risk in collaborative management.	Low	Possible	Minor	IUCN as the convening agency with trusted convening power can bring all parties together. IUCN will work closely with all agencies engaged in governance mechanism to address issues as they arise, at seascape level.	

Possible default of CBOs and local NGOs due to lack of capacity in implementing this kind of complex project.	Low	Possible	Minor	Capacity building and hand holding of CBOs and local NGOs to take up responsibilities of these resources very much closer to them.	IUCN
Barriers to establish proposed conservation trust fund (CTF)	Low	Possible	Minor	Appropriate legal and institutional reforms to be undertaken and all barriers to be removed in establishing a CTF	IUCN/EFL/Sarvodaya/DWC/CC&CRMD/DFAR/MoE/MoW&FRC
Fiduciary risks					
Mismanagement of GFCR resources	Low	Unlikely	Minor	Introduce financial discipline through strong project oversight by convening agent and engagement of local management committee and Project Steering Committee. Clear penalties and enforcement.	GoSL/IUCN
Assumptions: expressed commitment from all stakeholders to realise in project implementation					

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9 Monitoring and Evaluation and Results Framework

The SLCRI programme intends to achieve results relevant to all four GFCR outcomes in Sri Lanka. Its delivery will be closely monitored through the monitoring and evaluation results framework most recently developed by the GFCR in June 2023. The SLCRI programme intends to adopt the Management Effectiveness Monitoring Tool (METT) in the three seascapes as a continuous means of ensuring the good governance in seascape wide conservation management. IUCN SL will work with the OCPP and DWC on first METT assessment of the priority seascapes during early 2024, which could provide a baseline for this indicator. The GFCR results framework monitors 10 mandatory fund indicators together with sector indicators to be adopted by the programme. IUCN Sri Lanka, as the convening agency of the SLCRI have proposed 11 preliminary sector indicators listed below, including the METT assessment score. They will be further developed with the support from GFCR and the National Steering Committee, which will then be presented with the monitoring protocol and validated at the programme inception workshop. Furthermore, GFCR indicators will contribute to the monitoring of global targets of the GCRMN and the GBF. Preliminary baseline surveys conducted during programme preparation, together with the implementation partners identified in the programme have provided insight into some of the indicator baselines. However, targeted further studies are currently being carried out to develop the indicator baseline values for each seascape, which will be validated at the programme inception workshop with all stakeholders and be submitted to the GFCR for information. Impact monitoring assessments will be conducted through the PMU established under IUCN Sri Lanka Country Office, together with identified partner research organization such as the BRT, EFL and ORCA as well as the Universities (mainly the University of Ruhuna, with the support of the regional universities such as Rajarata, Eastern and South-eastern and the Ocean University of Sri Lanka where necessary), together with the technical guidance from local and international experts, while the IUCN field team will also collect the data where necessary.

Some of baselines have already been established through bio-physical surveys and socio-economic studies conducted over the programme preparation. The rest of the baseline values for other indicators will be established over the first three months of the programme. Baseline establishment and first impact monitoring at 18-months (September 2025) is budgeted into the provided budget for the first 18 months of the SLCRI programme. Total budget for monitoring and evaluation for the first 18 months of the SLCRI programme amounts to USD 78,680. This budget comprises USD 23,895 for bio-physical and environmental baselines, USD 16,195 for socio-economic baselines, and USD 38,590 for first impact monitoring at 18-months. These budgets include staff and other personnel (USD 6,780), contractual services (USD 46,000), equipment, supplies, commodities, and materials (USD 6,500), and travel (USD 19,400). With advice from GFCR, the first impact monitoring is scheduled at the end of 18 months of the phase I of the programme, in September 2025 (presuming the programme inception in March 2024). Thereafter the programme will plan two more monitoring sessions during its phase II and III, i.e. in September 2027 (mid-term evaluation) and March 2030 (end-term evaluation). Mid-term monitoring will facilitate for adaptive management and decision-making regarding investments. End-term targets of impact indicators will be evaluated in December 2030. Hence, three impact monitoring sessions will be budgeted for the SLCRI programme altogether. The end-of programme evaluation in March 2030 will be charged for the final phase of the SLCRI with an increased level of co-financing. The results matrix developed with the monitoring and evaluation framework would continuously be deployed in tracking programmatic milestones and indicators. The results-based indicators to be monitored in SLCRI will also be used in the learning and communication strategy of the programme establishing a long-term monitoring protocol for the three priority seascapes.

Table 15: Monitoring and Evaluation and Results Framework

a) GFCR M&E FRAMEWORK: FUND INDICATORS (06.01.2023)

	Headline indicators	Component indicators	Methodology and frequency	Baseline – March 2024			Sep 2025 (end of phase I) Target			March 2030 (end-term) Target		
				BRS	KS	PIMNP	BRS	KS	PIMNP	BRS	KS	PIMNP
F1	**Coral reef extent of GFCR project**	F 1.1 ha of coral reefs in GFCR programming	We do not have exact data; approx. figure is provided; From Allen Coral Atlas and Sri Lanka coral reef surveys; Propose to keep the area as it is for 2025; 5% increase for 2030. Frequency: end of phase I and end-term	5620	461	152	5620	461	152	5900	484	159.6
F2	**Area (ha) of coral reefs under conservation and sustainable management**	F2.1 ha of MPAs and OECMs (GBF 30x30)	No OECMs yet; but each seascape has a single MPA; There may be an extension of the PIMNP boundary in the future by app 4 km2 to encompass the Coral Island at Irakkakandy. Frequency: end of phase I and end-term	30,670	953	471	30,670	953	471	30,670	953	475
		F2.2 ha of locally managed and co-managed areas	LMMA will be considered under this, which are not declared yet. As this requires a lot of stakeholder engagements as well as legal matters the declarations may be done after the phase 1 target. A single LMMA within Kayankerni will be attempted in Phase I. Frequency: end of phase I and end-term	0	0	0	0	1600	0	4500	2500	19200
		F2.3 ha of fisheries managed areas	Northwestern Fishery Management Area (262,800 ha)' has already been declared by DFAR, which encompass the entire BR Seascape (118,500 ha), which is 45% of the FMA. The Kayankerni seascape is 77,800 ha. 53,134 ha (68.3%) of the Kayankerni seascape is within the East Coast FMA which is 75 381 ha. Fisheries management within the remaining area of 24,666 ha of the Kayankerni Seascape will be improved through the activities of the SLCRI. No FMAs declared in around the Pigeon Island seascape. However, both east coast seascapes will be declared as SMAs under CC&CRMD, where the fisheries will be managed. Frequency: end of phase I and end-term	118, 500	0	0	118, 500	0	0	118, 500	24,666	32,580
		F2.4 ha of area with pollution mitigation	Currently there are no properly organised pollution mitigation activities in any of these seascapes, except for ad-hoc beach and reef cleaning campaigns. However, data on such reef cleaning and ALDFG removal activities will be collected over the first three months of phase I to establish the baseline. Mid-	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)

			term and end term targets will also be set during the phase I with much better understanding on pollution mitigation projects to be developed through the CPBSF together with each co-management committee. Frequency: end of phase I and end-term									
F3	**Area (ha) of coral reefs under effective coral restoration**	F3.1 Hectares of effective coral reef restoration	The extent of area covered by newly restored corals will be considered as the effectively restored reef area. Only the proper coral reef restoration under SLCRI interventions will be considered here, while non-scientific interventions previously failed in Bar Reef and Kayankerni seascapes are not considered for baselines. SLCRI will establish national reef restoration guidelines following Edwards & Gomez, (2007) and Edwards (2010). Accordingly, only carefully selected coral fragments will be used for restoration. The fragments will be attached to the reef substrate that is devoid of live corals due to bleaching and other causes of reef degradation. Frequency: end of phase I and end-term	0	0	0	0.03 (300 m^2)	0.01 (100 m^2)	0.01 (100 m^2)	0.1 (1000 m^2)	0.08 (800 m^2)	0.08 (800 m^2)
		F3.2 Number of in situ coral restoration projects	Nothing is going on right now. GFCR programme will go for a single restoration project in each site. Further, there will be corporate partnership projects or any other individual restoration projects, that should follow the restoration guidelines set by SLCRI. Frequency: end of phase I and end-term	0	0	0	1	1	1	3	3	3
		F3.3 Number of coral restoration plans, technologies, strategies or guidelines developed	National policy and guidelines will be applicable for all three sites + each seascape co-management plan will have a restoration plan embedded in it + there will be new technologies adopted in each seascape. Frequency: end of phase I and end-term	0	0	0	2	2	2	3	3	3
		F3.4 Number of coral restoration trainings	Theoretical and practical training programmes documented at the PMU. Frequency: biennially	0	0	0	1	1	1	4	4	4
		F3.5 Number of people engaged in coral restoration	Trainee sign sheets documented at the PMU. Frequency: biennially	0	0	0	10	10	10	30	30	30
		F3.6 Number of response plans (incl. financial mechanisms, e.g., insurance) in place to support coral restoration after severe shocks (e.g., storms, bleaching)	Each seascape co-management plan will have a response plan to support coral restoration after severe shocks. Frequency: end of phase I and end-term	0	0	0	1	1	1	1	1	1

F4	**Change in coral reef health**	F4.1 Average live hard coral cover, %	Line intercept transect and photo quadrat sampling methods; Targets were determined considering possible bleaching events in future. Frequency: biennially	12%	36%	47%	15%	40%	50%	23%	45%	55%
		F4.2 Average macroalgae/other benthic groups, %	Line intercept transect and photo quadrat sampling methods; Here we consider only the macro algae cover. Frequency: biennially	12%	11%	4%	10%	8%	4%	8%	6%	4%
		F4.3 Average reef fish biomass, kg/ha	This will be developed for selected reef fish species which are of economic and ecological importance. Frequency: biennially	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
F5	**Number of communities engaged in meaningful participation, co-development and capacity strengthening**	F5.1 Number of communities engaged in meaningful participation and co-development	There are no meaningful participation and co-development at present. However many groups such as fishermen, divers, tour operators, etc. will be brought into a meaningful participation in future. Frequency: end of phase I and end-term	0	0	0	4	3	3	8	6	7
		F5.2 Number of local organizations engaged in meaningful participation and co-development	Here we have considered the number of Fisheries Cooperative Societies as the baseline due to the lack of current co-development mechanisms engaged with other organisations, however such collaborations will be developed with the proposed co-management mechanism (Youth organisation, Women's organisation, CCGs, Hoteliers organisation, Tourist guides organisation, etc.) Frequency: end of phase I and end-term	13	2	2	20	8	10	25	12	15
		F5.3 Number of local scientific/research partners involved in strengthening capacity for participation and co-development (e.g., national universities, regional science organizations)	Here we have considered all relevant universities mentioned above, while NARA, NAQDA and IUCN are doing research in all three seascapes + BRT in KS & PINP + EFL in BRS Frequency: end of phase I and end-term	5	5	5	8	7	7	11	9	9
		F5.4 Number of local practitioners trained / supported in coral reef conservation (e.g. community rangers)	Currently there are no trained individuals; CCGs will be established in priority seascapes for which relevant training will be provided, hence the number of individuals identified for CCGs have been used to set targets. Frequency: end of phase I and end-term	0	0	0	15	8	12	25	12	20
		F5.5 Number of agreements with local authorities or fishing cooperatives to manage marine resources (e.g., LMMAs, MPAs, OECMs)	The number of LMMAs identified during programme preparation includes two in BRS, two in KS and three in PIS; however there will be other agreements than LMMA agreements to be signed with the development of the programme - Hence the	0	0	0	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)

			targets are left to be determined during the Phase I. Frequency: end of phase I and end-term									
		F5.6 Number of national policies linked to GFCR engagement, e.g., NBSAPs, blue economy policies, national MPA declarations)	11 Acts, policies and plans can be counted currently at the National scale, which are linked to all three priority seascapes; SMA Plans have been developed for BRS and PIS. The SLCRI will develop national policies on coral restoration, as well as bio-credits, blue bonds and bioprospecting initiatives; further the SLCRI may develop other national or seascape specific guidelines which will be counted here. Frequency: end of phase I and end-term	12	11	12	16	15	16	19	18	19
F6	**Number of people supported through livelihoods, direct jobs, income, and nutrition**	F6.1 Number of direct jobs created (disaggregated by gender, age, disability, Indigenous peoples, small-scale producers)	Baseline has been regarded as 0 as the programme is still in its development stage. Frequency: end of phase I and end-term	0	0	0	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
		F6.2 Number of people with increased income and/or nutrition from GFCR support (disaggregated by gender, age, disability, Indigenous peoples, small-scale producers)	Baseline has been regarded as 0 as the programme is still in its development stage. Frequency: end of phase I and end-term	0	0	0	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
F7	**Number of people supported to better adapt, respond and recover to the effects of climate change and major external shocks as a result of GFCR**	F7.1 total direct beneficiaries (disaggregated by gender, age, disability, Indigenous peoples, small-scale producers)	Baseline has been regarded as 0 as the programme is still in its development stage. Frequency: end of phase I and end-term	0	0	0	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
		F7.2 total indirect beneficiaries (disaggregated by gender, age, disability, Indigenous peoples, small-scale producers)	Baseline has been regarded as 0 as the programme is still in its development stage. Frequency: end of phase I and end-term	0	0	0	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
		F7.3 Number of financial mechanisms/reforms to help coastal communities respond and recover from external shocks (e.g., insurance, loans, village savings, restoration crisis plans, etc)	Existing government mechanism to compensate for natural disasters/shocks is the only mechanism available in all over the island. SLCRI will be developing Disaster Risk Reduction (DRR)plans and Social Safety Nets (SSN) for each seascape. Hence, each site will have three plans by the end of the programme – regularised existing government mechanism, the new DRR plan and the new SSN.	1	1	1	2	2	2	3	3	3

			Frequency: end of phase I and end-term									
		F7.4 Number of governance reforms/policies to support response and recovery to external shocks (e.g., crisis management plans, reforms for temporary alternative employment)	Only opportunistic Government and corporate responses exist. The SLCRI will adopt and implement the government recommendations where relevant. Frequency: end of phase I and end-term	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
F8	**Amount of public, private, and philanthropy finance mobilized by the GFCR**	F8.1 Amount, number and type of public investments	Baseline has been regarded as 0 as the programme is still in its development stage; Public Investment through DWC, CC&CRMD, DFAR, SLTDA, etc. Frequency: end of phase I and end-term	0	0	0	3	3	3	5	5	5
		F8.2 Amount, number and type of private investments	Baseline has been regarded as 0 as the programme is still in its development stage. Frequency: end of phase I and end-term	0	0	0	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
		F8.3 Amount, number and type of philanthropy investments	Baseline has been regarded as 0 as the programme is still in its development stage. Frequency: end of phase I and end-term	0	0	0	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
		F8.4 Number of businesses and sectors with GFCR funding sources	Baseline has been regarded as 0 as the programme is still in its development stage; Sectors such as sustainable fisheries, sustainable aquaculture, eco-tourism, waste management, clean energy, sustainable ocean production, etc. will be supported through the CPBSF. Much of their funding will be provided during the phase I (mid-term), while GFCR contributions will be reduced towards the end term. Frequency: end of phase I and end-term	0	0	0	1	1	1	5	3	4
		F8.5 Number and type of sustainable finance mechanisms	Baseline has been regarded as 0 as the programme is still in its development stage. Various sustainable finance mechanisms such as CTFs, Bio-credits, Blue Bonds will be developed when the programme proceeds. Frequency: end of phase I and end-term	0	0	0	2	2	2	4	4	4
		F8.6 Leverage/mobilization ratio by sector (fisheries, water quality, restoration) of GFCR	Baseline has been regarded as 0 as the programme is still in its development stage. Frequency: end of phase I and end-term	0	0	0	4:1	4:1	4:1	1:4	1:4	1:4

		investment to other mobilized financing										
F9	**Amount of revenue and ROI ($)**	F9.1 Amount of revenue and ROI generated from sustainable financing (by type)	Baseline has been regarded as 0 as the programme is still in its development stage. Frequency: end of phase I and end-term	0	0	0	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
		F9.2 Number and type of sustainable revenue streams	Among the three seascapes MPAs has a mechanism of charging an entrance fee, however it goes into the Governments consolidated funds. About 20 sustainable revenue streams that contributes to conservation and management, has been identified in the Theory of Change, which will be developed along the programme. Frequency: biennial	0	0	1	6	4	6	12	10	12
		F9.3 Amount (and %) of revenue in local enterprises	Site specific data is not available, and whatever the revenue generated through local enterprises are not incorporated into a formal market mechanism. Here we consider only the GFCR inputs. Frequency: end of phase I and end-term	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
F10	**Number of gender-smart investments**	F10.1 Number of GFCR investments qualified as 2X Challenge standards, and % of total GFCR investments	When exploring the 2X challenge methodology, it was found that the data we have on the seascapes are inadequate for the required calculation, hence, it will be revisited during the phase I. Frequency: end of phase I and end-term	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)

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b) SECTOR INDICATORS

Sector type	Expected Result / Rationale	Indicator	Unit	Methodology	Additional information	Frequency	Means of verification	Baseline – March 2024			Sep 2025 (end of phase I) Target			March 2030 (end-term) Target		
								BRS	KS	PIS	BRS	KS	PIS	BRS	KS	PIS
Thriving and Restored Marine Habitats	Improvement in coral reef ecosystem health and reduction in human pressures	Species richness for corals (hard and soft corals) in target reef area	# of species/ha or abundance of indicator species	Total # of species identified/# of has assessed or use of indicator species	Indicator value to be derived from sampling.	End of phase I, mid-term and end-term	Visual census	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	No change	No change	No change	(+)3%	(+)3%	(+)3%
Thriving and Restored Marine Habitats	Improvement in coral reef ecosystem health and reduction in human pressures	Species richness for reef fish in target reef are	# of species/ha or abundance of indicator species	Total # of species identified/# of has assessed or use of indicator species	Indicator value to be derived from sampling.	End of phase I, mid-term and end-term	Visual census	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	No change	No change	No change	(+)5%	(+)5%	(+)5%
Sustainable Ocean Resources	Enhanced empowerment and stewardship for coastal communities in implementing sustainable fishing practices e.g. sustainable fish capture techniques, stock management, sustainable fishery	Proportion of fisherfolk using sustainable fishing practices	%	# of fisherfolk using sustainable fishing practices / total number of fisherfolk in the local area	Sustainable fishing practices to be defined in relation to investee's activities	End of phase I, mid-term and end-term	Investee self-reporting; Project Logs; Sustainable fisheries training; Gear & equipment provided to fisherfolk	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	45%	55%	55%	70%	75%	75%
Sustainable Management		Management Effectiveness Monitoring Tool (METT) – 4 Assessmsnt Score		Standard methodology for METT assessment		End of phase I and end-term		TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
Sustainable Management		Proportion of protected area management costs covered by sustainable				End of phase I and end-term		TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)

		revenue streams														
Sustainable Tourism	Increased participation of marine recreation providers	Participation of costal and marine tourism service providers in reef-positive programs	# (and %)	Total # of providers or individuals that participate in programs (Total # of providers that participate in programs/Total # of providers in target area) X 100	Reef-positive programs to include e.g. training and capacity building for local diving experience providers around best practice to minimise damage to reefs from anchoring/tourists trampling reefs etc.	End of phase I and end-term	Official list of marine recreation providers from government agency (if available), list of participating marine recreation providers, project or consultation reports, materials or standards on how to enhance/protect reef health; investee self-reporting	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
Waste & Pollution Management	Reduction in levels of pollution in coral reef ecosystems	Nutrient pollution of coastal waters	Concentration per unit of water	Volume of nutrient * (1 / Sample area)	Pollutant levels will be monitored against known pollution standards. Threshold levels of pollution for each type of pollution to be determined.	End of phase I, mid-term and end-term	Water sampling via on board survey vessels, land-based laboratory, in-situ sampling	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
Waste & Pollution Management	Reduction in levels of pollution in coral reef ecosystems	Plastic pollution of coastal waters	T/ha	(Total volume of macroplastics * (1 / Sample area)) + (Total volume of microplastics * (1 / Sample area)	Disaggregated macroplastics and microplastics to also be available. Microplastics are small plastic particulates below 5 mm in size	End of phase I, mid-term and end-term	In situ measurements of plastic litter (including plastic particles) at various depths; visual surveys for larger plastic items	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)

Waste & Pollution Management	Enhanced infrastructure for managing plastic waste	Capacity for plastic waste management	T	Capacity of installed infrastructure and available equipment for waste collection, sorting or recycling (disaggregated by type of activity)	Based on the maximum collection, sorting or recycling potential of the waste system.	End of phase I and end-term	Investee self-reporting, Project audits	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)
Climate-Resilient Coastal Communities		People supported to adapt to climate change, based on alternative livelihood generation (#)				End of phase I and end-term		TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)	TBD (Ph I)