Ocean Country Partnership Programme

Achieving fair and effective marine protected and conserved areas in Belize through the IUCN Green List Standard:

A Proposed Roadmap for Engaging the Belize Marine Protected Areas in the IUCN Green List Standard and Its Independent Verification Process

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Ocean Country Partnership Programme:
The Ocean Country Partnership Programme (OCPP) is a UK Government-led programme delivered under the Blue Planet Fund in Overseas Development Assistance (ODA) eligible countries. Through this programme, Cefas, JNCC and MMO will provide technical assistance to support countries to tackle marine pollution, support sustainable seafood practices and establish designated, well-managed and enforced marine protected areas.

Executive Summary

This report presents a roadmap for achieving IUCN Green List pathway for five priority Marine Protected Areas (MPAs) in Belize: Blue Hole Natural Monument, Corozal Bay Wildlife Sanctuary, Glover's Reef Marine Reserve, Half Moon Caye Natural Monument, and Turneffe Atoll Marine Reserve. The initiative is part of Belize's broader efforts to strengthen marine conservation effectiveness, align with international biodiversity commitments, and leverage the Belize Blue Bond to secure sustainable conservation financing.

The Green List Standard provides a globally recognized framework to ensure that protected and conserved areas meet high standards of governance, design, management effectiveness, and conservation outcomes. This roadmap builds upon the 2024 assessment of 14 MPAs in Belize using the Improvement Benchmarking and Evaluation Index (GL-IBEX), which identified strengths, gaps, and opportunities for improvement. The selected MPAs were chosen based on their potential to meet Green List criteria with targeted interventions.

Key findings from the GL-IBEX assessment indicate that while governance and management effectiveness are generally strong, there are gaps in demonstrating conservation outcomes (for natural values, associated ecosystem services and cultural values) and securing long-term financial sustainability. The roadmap outlined in this report includes tailored actions to address these challenges, structured around the four components of the IUCN Green List Standard:

1. Good Governance – Strengthening co-management arrangements, stakeholder engagement, transparency, and equity.

2. Sound Design & Planning – Improving site planning, climate adaptation strategies, and threat assessments.

3. Effective Management – Enhancing enforcement capacity, monitoring frameworks, and financial sustainability mechanisms.

4. Positive Conservation Outcomes – Establishing measurable biodiversity, ecosystem service, and cultural conservation indicators.

The roadmap provides a step-by-step approach to the Green List pathway, including validated GL-IBEX assessments, and structured follow-up mechanisms. It prioritizes SMART (Specific, Measurable, Achievable, Realistic, Time-bound) actions that will enable each MPA to improve its conservation effectiveness and meet Green List requirements.

Successful implementation of this roadmap will position Belize as one of the leaders in marine conservation, contributing to its 30x30 conservation targets and enhancing the resilience of its MPA network. Collaboration among government entities, co-management partners, conservation organizations, and local communities will be critical to achieving the objectives set forth in this report.

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Acronym List

Acronym	In full
BHNM	Blue Hole Natural Monument
CBD	Convention on Biological Diversity
CBWS	Corozal Bay Wildlife Sanctuary
EAGL	Expert Assessment Group for the Green List
GL-IBEX	Green List - Improvement Benchmarking and Evaluation Index
GRMR	Glover's Reef Marine Reserve
HMCNM	Half Moon Caye Natural Monument
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee
MPA	Marine Protected Area
NECO	Natural, Ecosystem Services, and Cultural Outcomes
NGO	Non-Governmental Organization
ODA	Overseas Development Assistance
OCPP	Ocean Country Partnership Programme
PCA	Protected and Conserved Area
PES	Payment for Ecosystem Services
SDGs	Sustainable Development Goals
SI	Statutory Instrument (e.g. SI 96 of 1996)
TAMR	Turneffe Atoll Marine Reserve
TASA	Turneffe Atoll Sustainability Association
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organization
WCPA	World Commission on Protected Areas
WS	Wildlife Sanctuary

1. Introduction

Marine Protected Areas (MPAs) are critical tools for conserving marine biodiversity, supporting sustainable fisheries, and maintaining ecosystem services that benefit both people and nature. Belize, renowned for its rich marine biodiversity and commitment to conservation, has made significant strides in establishing and managing MPAs. However, ensuring that these areas achieve their conservation objectives effectively and equitably requires continuous improvement, rigorous assessment, and adherence to internationally recognized standards.

The International Union for Conservation of Nature (IUCN) Green List Standard provides a globally recognized framework to assess and certify well-managed and effectively governed protected and conserved areas. Corresponding to the Green List Standard signals that an MPA meets the high standard of conservation effectiveness, equitable governance, and effective management. In Belize, the Green List process is particularly relevant as the country advances toward its national conservation goals, including its commitments under the Global Biodiversity Framework's Target 3 (30x30) and the Conservation Commitment to Ocean Conservation through the sustainable finance framework linked to the Belize Blue Bond.

This report outlines a strategic roadmap for five priority MPAs in Belize to apply for the IUCN Green List programme from this year to 2027 (Belize Blue Bond milestone timeline). The selected MPAs – Blue Hole Natural Monument, Corozal Bay Wildlife Sanctuary, Glover's Reef Marine Reserve, Half Moon Caye Natural Monument, and Turneffe Atoll Marine Reserve – have been identified based on prior self-assessments from 2023 to 2024 that were supported by IUCN and been selected by the Government of Belize.

The roadmap builds on the findings of the 2024 self-assessment of 14 MPAs in Belize using the Green List framework. It leverages the Improvement Benchmarking and Evaluation Index (GL-IBEX) tool to evaluate progress, identify management gaps, and develop site-specific action plans. Through a participatory approach involving site managers, co-management organizations, government agencies, and conservation experts, this initiative aims to enhance the effectiveness and sustainability of Belize's MPA network.

The report is structured as follows: an overview of the scope and objectives of the mission, a review of the methodology and background information, updated self-assessment scores with the 5 MPAs' matrix reflecting the verified self-assessment results for the five MPAs, highlighting areas for improvement and progress metrics and a comprehensive document outlining SMART (Specific, Measurable, Achievable, Realistic, Time-bound) actions for each of the five MPAs.

2. Scope of the Report

This report answers to the project on "Ocean Country Partnership Programme in Belize: Achieving IUCN Green Listing Phase 2", for the following outputs:

Output 1.1: A meeting in Belize with a detailed report, validated self-assessment scores, and identified gaps is conducted.

Output 1.2: Updated and fully functional MPA matrix reflecting the verified self-assessment results for the five MPAs, highlighting areas for improvement and progress metrics.

Output 2.1: A comprehensive document outlining SMART actions for each of the five MPAs, specifically aligning to available Belize funding opportunities and timelines.

Output 2.2: A prioritised list of quick-win actions for the five MPAs, including implementation guidance and feasibility assessment within the project timeline.

The objectives of this phase of the project are:

- Verification work: Building on the Green List GL-IBEX results done in 2023-2024, the approach will include a targeted meeting with MPA co-site managers to verify previous self-assessment results for five selected MPAs.

- Action-oriented planning: The approach will prioritise the development of SMART actions tailored to each selected MPA's context and aligned with available funding opportunities. Quick-win actions will be identified for implementation within the project's timeline, ensuring progress.

3. Methodology

The workshop, held in Belize City from 26 to 27 February 2025, on *Advancing MPA Effectiveness through GL-IBEX Review and Green List Roadmap Development* was designed to support MPA site managers from Turneffe Atoll Marine Reserve, Corozal Bay Wildlife Sanctuary, Half Moon Caye Natural Monument, Glover's Reef Marine Reserve, and Blue Hole Natural Monument in refining their Green List GL-IBEX assessments from 2023-2024 and developing concrete action plans for Green List pathway for the upcoming years.

The workshop aimed to review self-assessment scores for each MPA, identify key gaps in management effectiveness, and equip participants with the necessary tools to strengthen compliance with the Green List Standard. Facilitated by IUCN and WCPA (World Commission on Protected Areas) experts, the event brought together co-managers and technical staff from various MPAs to engage in structured discussions, collaborative problem-solving, and roadmap development.

The day began with a plenary session that provided an overview of the IUCN Green List Standard and the GL-IBEX assessment framework. Participants revisited their GL-IBEX assessments and discussed their progress, ensuring a common understanding of the pathway process. This was followed by a breakout group session where each MPA team reviewed its GL-IBEX results in detail. Site managers worked alongside IUCN experts to validate scores, update responses where necessary, and identify missing documentation or data gaps that needed to be addressed. Through these discussions, participants gained clarity on their current standing and the specific steps required to improve their conservation effectiveness.

In the afternoon, the focus shifted to action planning. Each site developed a tailored Green List roadmap, identifying priority actions, responsible individuals, and realistic timelines for completion. The process emphasized addressing weak criteria, proposing solutions, and establishing means of verification to ensure measurable progress. Where time allowed, participants shared their plans with the broader group, receiving feedback and fostering cross-site collaboration. This exercise reinforced the need for strategic, achievable interventions that would help each MPA meet the Green List process.

The final session brought participants together to discuss next steps and commitments. Site managers articulated their planned actions and agreed on follow-up mechanisms to track progress. The workshop concluded with a collective understanding of the path forward, ensuring that all participating MPAs had clear objectives and commitments to work toward Green List pathway. With validated GL-IBEX assessments, structured action plans, and a system for monitoring implementation, the workshop set a strong foundational dialogue for the five selected MPAs to proceed with the IUCN Green List process. For more detailed information, please refer to the Appendices.

To complement the technical sessions, participants also shared personal reflections and feedback on the workshop process, facilitation, and logistics. This feedback, captured in Annex 3, offers valuable insights into participant expectations, learning outcomes, and opportunities for future improvements.

4. Background Information

4.1 Project Brief

The Ocean Country Partnership Programme in Belize: Achieving IUCN Green List Phase 2 is a strategic initiative aimed at mapping the potential of Belize's MPAs in alignment with the IUCN Green List. The project builds on Belize's ongoing efforts to achieve the 30x30 target under the Global Biodiversity Framework, which requires both quantitative expansion of protected and conserved areas and qualitative improvements in governance, management, and equitable conservation benefits.

In its first phase (July 2023 – June 2024), the initiative assessed 14 MPAs using the IUCN Green List Standard, a globally recognized benchmark for effective and equitable conservation. This assessment, conducted in collaboration with the OCPP and the Ministry of Blue Economy and the Belize Fisheries Department, provided a baseline of management effectiveness, revealing disparities across sites and highlighting the need for tailored strategies. While some MPAs showed strong governance and management effectiveness, others required targeted interventions to enhance their capacity and meet the Green List Standard.

Building on these findings, Phase II focuses on achieving tangible improvements in five priority MPAs identified as being closest to meeting the Green List Standard. These sites – Turneffe Atoll Marine Reserve, Corozal Bay Wildlife Sanctuary, Half Moon Caye Natural Monument, Glover's Reef Marine Reserve, and Blue Hole Natural Monument – will undergo a structured process to verify self-assessment results, refine management actions, and enhance stakeholder engagement.

Expected outcomes by 2027 include measurable improvements in governance, management effectiveness, and equitable conservation, with five MPAs achieving significant progress toward Green List pathway. By 2030, the ideal goal is for all 14 MPAs assessed in Phase I to demonstrate their biodiversity outcomes, using the Green List Standard to sustain their effectiveness, ensuring Belize's marine conservation framework remains strong, adaptive, and impactful.

4.2 Report on the Effectiveness of 14 MPAs in Belize using the Green List in 2024

The report provides a comprehensive evaluation of the country's MPA network, benchmarking its management effectiveness against the IUCN Green List Standard. Conducted under the Ocean Country Partnership Programme (OCPP), the assessment utilizes the Improvement Benchmarking and Evaluation Index (GL-IBEX) self-assessment tool to measure MPA performance and guide future improvements.

4.2.1 Assessment Context and Approach

Belize is globally recognized for its rich marine biodiversity, hosting part of the Mesoamerican Barrier Reef, the second largest barrier reef system in the world. The 14 MPAs pre-assessed in the 2024 report cover key biodiversity hotspots and are vital for protecting marine ecosystems, supporting sustainable fisheries, and maintaining cultural and economic activities such as tourism.

Each site underwent a self-assessment process, where MPA co-managers rated their effectiveness across these criteria. The IUCN then conducted a review, providing recommendations to strengthen governance, management effectiveness, and conservation outcomes.

As this was a self-assessment exercise, some results may require further verification to ensure consistency and accuracy across sites, considering that more time and better understanding of the green list standard is required for it.

4.2.2 Key Findings: Strengths and Challenges

4.2.2.1 Good Governance

Belize's MPAs generally perform well in governance, with most sites demonstrating clear legal mandates, institutional structures, and co-management agreements with government agencies and NGOs. Ten (10) out of the fourteen MPAs self-scored above 80% for the Good Governance Component, indicating a generally strong perception of governance performance across the network. Community participation in decision-making is evident in some sites, but transparency and accountability mechanisms remain weak in several MPAs.

Strengths:

- Most MPAs have well-defined governance structures.
- Community-based and NGO-led co-management models contribute to localized engagement.
- Some MPAs, such as Turneffe Atoll Marine Reserve and Caye Caulker Marine Reserve, demonstrate effective governance vitality.

Challenges:

- Weak transparency mechanisms – limited public access to decision-making processes.
- Uneven stakeholder engagement – some MPAs lack full participation of Indigenous and local communities.
- Limited gender and equity considerations – participation of women and marginalized groups in governance is low.

4.2.2.2 Sound Design and Planning

The report highlights strong conservation planning efforts, with clear conservation objectives and zoning regulations. Belize's MPAs follow scientifically informed planning that includes no-take zones, multiple-use areas, and buffer zones.

Strengths:

- Most MPAs have clear conservation targets and strategic management plans.
- Legal frameworks, including the Fisheries Resources Act, support biodiversity protection.
- Integration with Belize's Blue Bond initiative, which aims to finance long-term conservation.

Challenges:

- Inconsistent threat assessments – not all MPAs have systematic evaluations of threats such as illegal fishing, climate change, and pollution.
- Climate adaptation strategies lacking – most MPAs do not have specific plans for addressing climate-related impacts such as coral bleaching and sea-level rise.
- Insufficient ecological connectivity between MPAs, which limits the effectiveness of habitat protection efforts.

4.2.2.3 Management Effectiveness

While MPAs are generally well-designed, their operational capacity varies widely, affecting enforcement, monitoring, and long-term sustainability.

Strengths:

- Some MPAs, such as Hol Chan Marine Reserve and Blue Hole Natural Monument, benefit from robust enforcement and tourism revenue.
- Patrol and compliance efforts are present in most sites, contributing to reduced illegal activities.

Challenges:

- Staffing shortages and financial constraints limit enforcement capacity, particularly in remote sites.
- To overcome financial constraints, allocation of management funds from national trust funds or blue bonds is needed.
- Limited integration of socio-economic monitoring – most MPAs lack mechanisms to assess the economic benefits of conservation to local communities. Regulations are also needed for users to submit socioeconomic data to managers.
- Weak capacity in managing threats – MPAs score lowest in responding to illegal fishing, pollution, and habitat degradation. It is important to consider that action from multiple institutions is required to increase capacity and reduce threats.

4.2.2.4 Successful Conservation Outcomes: the Weakest Performance Area

The assessment revealed that conservation outcomes remained the least achieved component. Many MPAs struggled to demonstrate measurable improvements in biodiversity protection due to gaps in monitoring systems and unclear success thresholds.

Strengths:

- Some MPAs show signs of positive conservation trends, particularly in coral reef health and fisheries recovery.
- Several sites report active engagement in species monitoring and habitat restoration.

Challenges:

- Inadequate monitoring frameworks – many MPAs lack structured and standardized data collection and evaluation systems.
- Limited success in tracking biodiversity recovery – without clear benchmarks, it is difficult to assess whether conservation measures are effective.
- Poor integration of cultural and Indigenous conservation values – most MPAs do not track traditional ecological knowledge or cultural heritage preservation.

4.2.3 Recommendations for Strengthening MPA Effectiveness

The report provided tailored recommendations for each of the 14 MPAs while outlining overarching priorities to improve effectiveness at the national level:

4.2.3.1 Strengthen Governance and Stakeholder Participation

- Increase community participation and Indigenous representation in MPA governance.
- Improve transparency mechanisms by making management plans, budgets, and conservation reports publicly accessible.
- Develop gender-inclusive policies to enhance the role of women and marginalized groups in conservation leadership.

4.2.3.2 Enhance Threat Response and Climate Adaptation

- Conduct systematic threat assessments to address site-specific challenges, such as illegal fishing, coral bleaching, and pollution.
- Integrate climate resilience strategies into MPA management, ensuring proactive responses to climate risks.
- Expand ecological connectivity between MPAs to improve habitat protection and species migration corridors.

4.2.3.3 Improve Resource Allocation and Capacity Building

- Increase financial investment in MPAs through sustainable tourism, conservation financing, and partnerships.
- Strengthen law enforcement capacity by expanding patrol coverage and investing in technology-based monitoring (drones, remote sensing).
- Provide targeted training programs for MPA managers and rangers to enhance compliance and conservation effectiveness.

4.2.3.4 Establish Robust Monitoring and Evaluation Systems

- Develop standardized indicators to measure biodiversity health, socio-economic benefits, and conservation outcomes.
- Implement regular monitoring cycles to track progress and adapt management strategies accordingly.

- Promote scientific research partnerships to strengthen conservation evidence and inform decision-making.

4.3 Selected MPAs for GL-IBEX Validation and Roadmap

The five MPAs selected by the Government of Belize (Belize Fisheries Department) are:

- Blue Hole Natural Monument (additional site)
- Corozal Bay Wildlife Sanctuary
- Glover's Reef Marine Reserve (additional site)
- Half Moon Caye Natural Monument
- Turneffe Atoll Marine Reserve

4.3.1 Priority Site 1: Blue Hole Natural Monument

Blue Hole Natural Monument (BHNM) is a globally significant marine sinkhole within Lighthouse Reef Atoll, the easternmost of Belize's three atolls. Covering 1,023 acres (414 ha), it was designated a Natural Monument in 1996 (SI 96 of 1996) under IUCN Category III and is co-managed by the Belize Audubon Society (BAS) and the Forest Department (Table 1).

Located within the Belize Barrier Reef Reserve System (Figure 1) – a UNESCO World Heritage Site, the Blue Hole is a nearly perfect circular sinkhole approximately 300 metres wide and 125 metres deep, formed 15,000 years ago during the Pleistocene era. It features stalactites and submerged caves, while the surrounding shallow reef supports corals, seagrass, reef fish, sharks, and turtles. The Blue Hole also acts as a natural sediment trap, providing valuable records of past geological and climatic events.

Table 1. Overview of the Blue Hole Natural Monument.

WDPA ID	**302906**
Reported area (km^2)	**4.14 km^2**
IUCN management category	**III Natural Monument**
Status:	**Designated**
Type of designation	**National**
Status year	**1996**
Governance type	**Shared governance**
Management authority	**Forest Department**
Co-Management	**Belize Audubon Society**
Management plan (dates)	**2017-2021**
Management Effectiveness Evaluations	**MEE (2023)** **METT 2010, 2013**

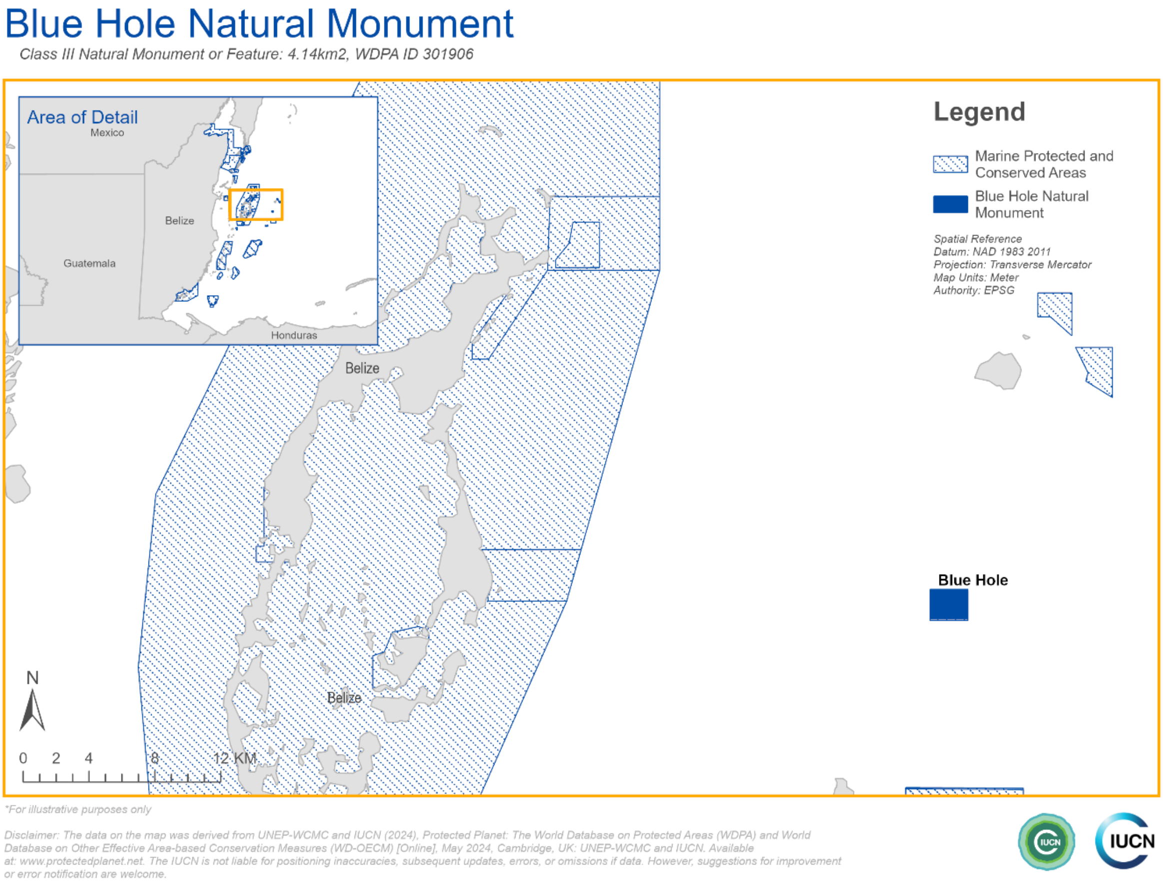

Figure 1. Map of Blue Hole Natural Monument (© IUCN).

As a no-take replenishment zone, BHNM contributes to commercial fish species conservation and supports marine biodiversity, including potential endemic and cryptic species. It is one of Belize's most famous dive sites, attracting international visitors.

The 'natural, ecosystem, cultural outcomes' NECO table (Table 2) for BHNM shows threshold level for all site values (Criterion 3.7.2). This means that BHNM has partially set thresholds for success. However, the conditions and trends to be able to systematically determine conservation outcomes are currently missing (Criteria 4.1, 4.2, 4.3).

Table 2. Overview of the Blue Hole Natural Monument Values.

Value	Major values	Thresholds	Conditions	Trends
Natural values	Coral Reef	Live coral cover: Blue hole (2019) – 26%	Live coral cover: Blue hole (2023) – 18%	N/A
	Carbon Sinks	35	N/A	A national report is generated by the GOB that includes this information

Value	Major values	Thresholds	Conditions	Trends
Ecosystem Services	Job availability (Tourism)	80–90% direct employment tour guides	N/A	N/A
Cultural Values	Education and awareness with traditional fishers	Engage 150 fisherfolk	N/A	N/A

Despite its ecological importance, BHNM faces several significant threats, primarily linked to climate change and tourism pressure. Coral bleaching due to rising sea temperatures is a major concern, leading to habitat degradation and biodiversity loss. Additionally, high volumes of recreational diving activities contribute to physical damage to the fragile coral formations. Sedimentation from nearby areas and pollution from boat traffic further exacerbate the degradation of water quality. Although the site is a non-extractive, no-take zone, illegal fishing in adjacent areas also threatens the sustainability of marine resources within the protected zone.

4.3.2 Priority site 2: Corozal Bay Wildlife Sanctuary

The Corozal Bay Wildlife Sanctuary (CBWS), established in 1998, is a key marine protected area in northern Belize, near the Mexican border (). It primarily safeguards the Antillean manatee (*Trichechus manatus manatus*) and forms a transboundary conservation network with Mexico's Santuario del Manati. The sanctuary supports diverse ecosystems, including seagrass beds, which are essential for fisheries and nutrient filtration, and mangrove forests, which protect coastlines and provide critical habitats.

Covering 73,000 ha, it was designated under IUCN Category IV and is co-managed by the Sarteneja Alliance for Conservation and Development together with the Forest Department (Table 3).

CBWS plays a crucial role in regional biodiversity, serving as a nursery for commercial fish species, a habitat for bull sharks, dolphins, and crocodiles, and a nesting site for numerous bird species. The estuarine system also helps maintain the Belize Barrier Reef by trapping sediments. Additionally, the presence of stromatolites, rare carbonate formations, enhances its ecological significance.

Table 3. Overview of Corozal Bay Wildlife Sanctuary.

WDPA ID	**301909**
Reported area (km²)	**730.46**
IUCN management category	**IV Habitat/species management area**
Status: designated	**Designated**
Type of designation	**National**
Status year	**1998**
Governance type	**Shared governance**
Management authority	**Forest Department**
Co-Management	**Sarteneja Alliance for Conservation and Development**
Management plan (dates)	**2020 - 2024**
Management Effectiveness Evaluations	**MEE (2023)**

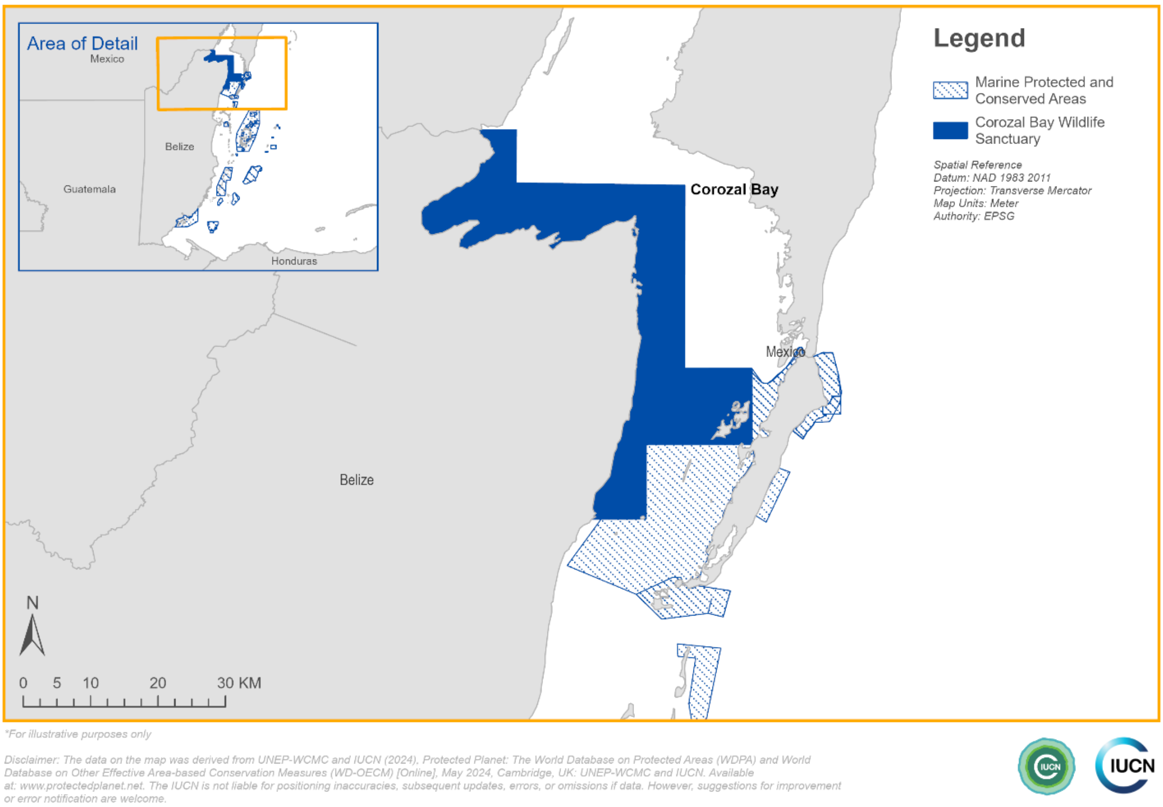

Figure 2. Map of Corozal Bay Wildlife Sanctuary © IUCN.

While primarily a biodiversity haven, CBWS also reflects Belize's natural heritage, though documented indigenous values remain limited. The sanctuary faces threats from unsustainable fishing, pollution, and coastal development. The Sarteneja Alliance for Conservation and Development (SACD) leads efforts to mitigate these threats through community-driven management, surveillance, enforcement, and research, ensuring the sanctuary's long-term ecological integrity.

The NECO (Natural, Ecosystem Services, Cultural values) table (Table 4) is a tool used to assess various aspects of a protected area, integrating a wide range of indicators. This analysis is particularly important for identifying areas of strength and opportunities for improvement in the management of Corozal Bay Wildlife Sanctuary (CBWS).

Table 4. Overview of Corozal Bay Wildlife Sanctuary Values.

Value	Major values	Thresholds	Conditions	Trends
Natural values	Fish	Catch for unit effort	NA	NA
	Manatee	Estimate average count of 30 individuals	33	Within range
	Bird	Number of nesting colonies	-	-
Ecosystem Services	Water quality	Acceptable standards (Maximum Permissible Limits (MPLs) for brackish water based on Ecological Criteria for Water Quality: dissolved oxygen 5 mg/l, Nitrites 0.002 mg/l, Nitrates 0.04 mg/l, Ammonium: 0.01 mg/l, phosphates 0.002 mg/l)	2018 assessment: dissolved oxygen 6.5 mg/l, Nitrites 0.003 mg/l, Nitrates 0.003 mg/l, Ammonium 0.002 mg/l, phosphates 0.002 mg/l	2018 assessment (dissolved oxygen 1.5 mg/l more than the MPL (positive), Nitrites 0.001 mg/l more than MPL (negative), Nitrates 0.037 mg/l less the MPL (positive), Ammonium 0.008 mg/l less than the MPL (positive), phosphates 0.000 mg/l same as the MPL (positive)
	Mangroves	Level of disturbance (km & %) 2011: 28.25 km 19.35%	"2023: 29.80 km 20.41%"	"Within range 0.27 km disturbed/year 0.09% disturbed/year"

Value	Major values	Thresholds	Conditions	Trends
Ecosystem Services	Sea grass	Sea Grass abundance (ha / % cover) 2015: 1,917.3 ha (2.61%) by Class 50–100% and 2,733.8 ha (3.72%) by Class 20–50%	Sea Grass abundance (ha / % cover) 2016: 126.2 ha (0.17%) by Class 50–100% and 438.6 ha (0.60%) by Class 20–50%	N/A
Cultural Values	Traditional Beach Fishing	10–18 beach traps	15 Traps	within range

CBWS is particularly vulnerable to unsustainable fishing practices, pollution, and coastal development. The sanctuary serves as a key habitat for the Antillean manatee, which is under threat from habitat destruction and boat collisions. Seagrass beds, crucial for juvenile fish and other marine species, are declining due to sedimentation and nutrient pollution. Furthermore, the proximity to urban and industrial areas leads to increasing contamination from agricultural runoff, plastic waste, and untreated sewage, significantly impacting water quality and ecosystem health.

4.3.3 Priority Site 3: Glover's Reef Marine Reserve

Glover's Reef Marine Reserve (GRMR) is part of the Belize Barrier Reef Reserve System, a UNESCO World Heritage Site. Covering 350.67 sq. km, it is the southernmost and most biologically developed offshore atoll in Belize, featuring diverse reef types. Located 45 km east of the mainland, its deep lagoon contains around 850 patch reefs and pinnacles, with five sand cayes along the southeastern edge (Table 5 and Figure 3).

GRMR is a biodiversity hotspot within the Mesoamerican Barrier Reef System, home to critically endangered species like hawksbill turtles and goliath groupers, as well as endangered green and loggerhead turtles. It is vital for reef conservation and hosts one of the last Nassau grouper spawning aggregations. The atoll's western wall supports an exceptionally dense benthic community.

Table 5. Overview of Glover's Reef Marine Reserve.

WDPA ID	**99653**
Reported area (km²)	**350.67**
IUCN management category	**IV Habitat/Species Management Area**
Status:	**Designated**
Type of designation	**National**
Status year	**1993**
Governance type	**Governance by government**
Management authority	**Fisheries Department**
Co-Management	**Wildlife Conservation Society (WCS) on behalf of Fisheries Department**
Management plan (dates)	**2019 – 2023**
Management Effectiveness Evaluations	**MEE (2023) Advanced METT 2019**

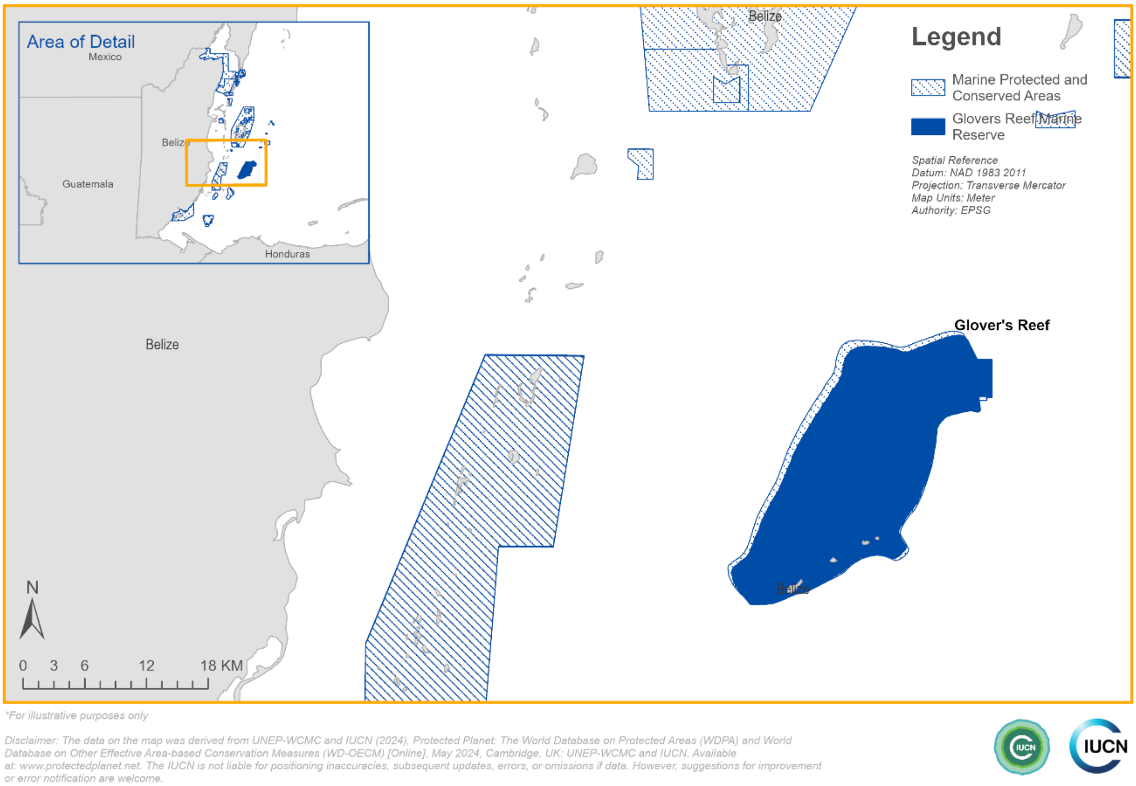

Figure 3. Map of Glover's Reef Marine Reserve © IUCN.

Established in 1993 under the Fisheries Act, GRMR is managed by Belize's Fisheries Department, with assistance from the Wildlife Conservation Society. Key stakeholders include fishers, tourists, and researchers. The area supports ecotourism, diving, and fishing, particularly for lobster and conch. Historically, the atoll was a Maya trading hub and later a refuge for British buccaneers. However, GRMR faces threats from overfishing, pollution, unregulated tourism, and climate change, jeopardizing its ecological integrity.

The ‘natural, ecosystem, cultural outcomes’ NECO table (Table 6) for GRMR shows only threshold level for natural values (Criterion 3.7.2). This means that GRMR has not yet set thresholds for success, nor has it measured trends and assessed status; thus, it cannot systematically determine conservation outcomes (Criteria 4.1, 4.2, 4.3).

GRMR is under severe stress due to overfishing, unregulated tourism, pollution, and climate change. The depletion of commercial species such as lobster and conch are a growing concern, affecting both biodiversity and local fisheries. Coral reef degradation is accelerating due to increased ocean temperatures, leading to more frequent coral bleaching events. Additionally, tourism-related impacts, such as anchor damage and waste disposal, threaten the ecological balance of the reserve. Invasive species like the lionfish (*Pterois volitans*) also pose a serious threat to native fish populations, disrupting food webs and reducing biodiversity.

Table 6. Overview of Glover’s Reef Marine Reserve Values.

Value	Major values	Thresholds	Conditions	Trends
Natural values	Corals	Live coral cover - HRI Index	% of Coral Bleaching (PB+WH) btw 2023–2025 declined by 48%	Decrease in partial bleaching and whole bleaching of corals observed btw 2023–2025
	Lobster	Abundance, carapace length	Fishers’ catch shows average CL above 3 inches, mean avg. 3.5 inches	-
	Fin fish	CPUE / Landings survey	Overfishing of large bodied commercial finfish species, as average fish caught is below length at sexual maturity	Data shows decrease in average size of large bodied commercial finfish species being landed
	Conch	Abundance, Length, Lip Thickness	47% increase in Queen Conch abundance within inner atoll of GRMR from 2022 to 2024 (243 ind. to 459 ind.). However, a 54% decline in abundance of harvestable size individuals.	High abundance of recruits.
Ecosystem Services	Shoreline protection	N/A	N/A	N/A
	Carbon sequestration	N/A	N/A	N/A

Value	Major values	Thresholds	Conditions	Trends
Cultural Values	Traditional Fishing Grounds	Belize Fisheries Department License for GRMR 2024: 499	N/A	N/A

4.3.4 Priority Site 4: Half Moon Caye Natural Monument

Half Moon Caye Natural Monument (HMCNM) is a 39.25 km^2 protected area in Belize, established in 1981 as the country's first nature reserve and Central America's first marine protected area. It is part of the Belize Barrier Reef Reserve System, a UNESCO World Heritage Site, and plays a key role in the Mesoamerican Reef, the world's second-largest barrier reef system. This site is co/managed by the Forest Department and Belize Audubon Society (Table 7 and Figure 4).

Located on Lighthouse Reef Atoll, HMCNM includes a 9,727 acre marine area with a reef wall dropping over 3,000 feet, supporting over 280 fish species. Its sandy beaches serve as vital nesting sites for sea turtles, while its drop-off areas host critical fish spawning aggregations.

The monument supports diverse ecosystems, including mangroves, coral reefs, and seagrass beds, essential for marine resource sustainability. It shelters endangered species like Hawksbill turtles, Nassau groupers, and red-footed boobies. The Half Moon Wall harbours rich coral formations, attracting migratory species such as marlin and sharks.

Table 7. Overview of Half Moon Caye Natural Monument.

WDPA ID	**2213**
Reported area (km^2)	**39.25 km^2**
IUCN management category	**II National Park**
Status:	**Designated**
Type of designation	**National**
Status year	**1982**
Governance type	**Shared governance**
Management authority	**Forest Department**
Co-Management	**Belize Audubon Society**
Management plan (dates)	**2017-2021**
Management Effectiveness Evaluations	**MEE (2023)** **METT 2006, 2008, 2010, 2013**

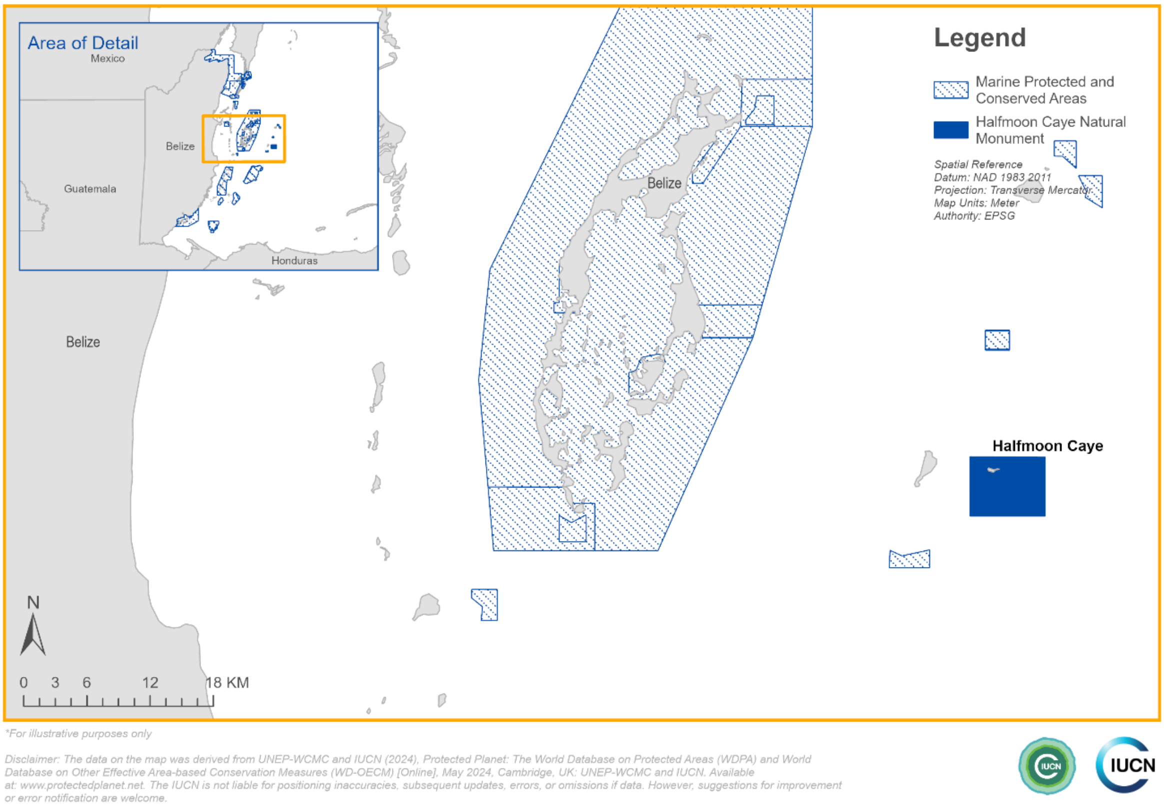

Figure 4. Map of Half Moon Caye Natural Monument © IUCN.

Managed by the Belize Audubon Society, HMCNM follows strict conservation guidelines, permitting only research, education, and tourism. As a top dive site, it supports local fisheries and tourism economies. Cultural evidence suggests Maya presence, and local Mestizo communities have historic ties to the atoll.

The ‘natural, ecosystem, cultural outcomes’ NECO table (Table 8) for HMCNM shows mostly threshold level for all site values (Criterion 3.7.2). This means that HMCNM has almost set thresholds for success, adequately measured trends and assess status, and will be able to systematically determine conservation outcomes (Criteria 4.1, 4.2, 4.3).

Table 8. Overview of Half Moon Caye Natural Monument Values.

Value	Major values	Thresholds	Conditions	Trends
Natural values	Sharks	N/A	N/A	N/A
	White Phase Red-footed Booby Birds	1,200 birds	1,200 birds or below is poor	® The population is generally stable with minor variation that vary on an annual basis
Ecosystem Services	Carbon Sinks	not set	N/A	A national report is generated by the GOB that includes this information
Socio-economic	Job availability (Tourism)	80–90% direct employment	90–100% direct employment	N/A
Cultural Values	Traditional fishing	Belize Fisheries Department License for Lighthouse Reef 2020: 720	N/A	N/A

HMCNM faces threats from coastal development, tourism pressure, and climate change. The cayes' unique ecosystems, including littoral forests, coral reefs, and seagrass beds, are highly susceptible to rising sea levels and increased storm intensity. Unregulated tourism has also led to degradation of key habitats, particularly nesting sites for sea turtles and red-footed boobies. Climate change further exacerbates coral bleaching, reducing the resilience of the reef system to environmental stressors. Additionally, illegal fishing activities in surrounding waters continue to be a challenge despite conservation efforts.

4.3.5 Priority Site 5: Turneffe Atoll Marine Reserve

Turneffe Atoll Marine Reserve (TAMR) is Belize's largest and most ecologically diverse marine reserve, forming part of the Mesoamerican Reef, a global biodiversity hotspot. Located 50 km east of Belize City, it spans 1,470.63 km^2, encompassing reefs, seagrass beds, mangroves, and lagoons. It serves as a vital nursery for queen conch, spiny lobster, and reef fish and supports endangered species such as Nassau grouper, staghorn and elkhorn corals, and white-spotted toadfish. The atoll also shelters manatees, crocodiles, dolphins, sea turtles, and various coastal and migratory birds.

TAMR plays a critical role in coastal protection, absorbing storm impacts and preserving the barrier reef. It was designated a protected area in 2012 after two decades of advocacy and is co-managed by the Fisheries Department and the Turneffe Atoll Sustainability Association (TASA). The reserve was expanded in 2022 to enhance deep-sea conservation and contribute to Belize's 30x30 target (Table 9 and Figure 5).

Table 9. Overview of Turneffe Atoll Marine Reserve.

WDPA ID	**555542674**
Reported area (km²)	**7.76**
IUCN management category	**IV Habitat/Species Management Area**
Status:	**Designated**
Type of designation	**National**
Status year	**2003**
Governance type	**Governance by government**
Management authority	**Fisheries Department**
Co-Management	**TASA (Turneffe Atoll Sustainability Action)**
Management plan (dates)	**2023 – 2027**
Management Effectiveness Evaluations	**MEE (2023)**

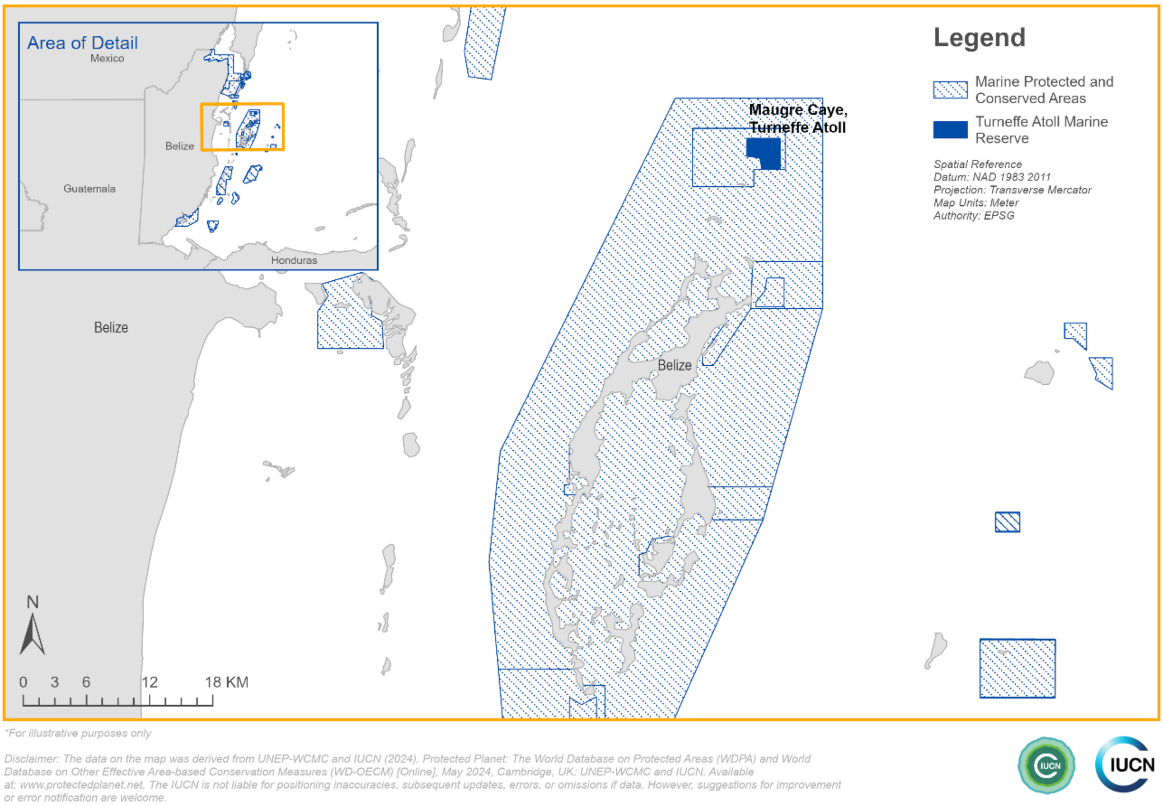

Figure 5. Map of Turneffe Atoll Marine Reserve © IUCN.

Historically significant to Mayan traders and later used by pirates, Turneffe now supports commercial fishing and tourism. However, it faces threats from destructive development, climate change, declining fisheries, and invasive lionfish. Conservation efforts focus on balancing sustainable use with ecological protection to safeguard this unique marine ecosystem.

The NECO (Natural, Ecosystem Services, Cultural values) table (Table 10) is a tool used to assess various aspects of a protected area, integrating a wide range of indicators. This NECO analysis is particularly important for identifying areas of strength and opportunities for improvement in the management of TAMR.

Table 10. Overview of Turneffe Atoll Marine Reserve Values.

Value	Major values	Thresholds	Conditions	Trends
Natural values	Coral reefs	Live coral cover categories for the Mesoamerican Reef Region (MAR): Critical (< 5%); poor (5–9%), fair (10–19%), good (20–39%) and Very Good (> 40%).	Turneffe has 15% average live coral cover (Fair Rating) across 18 sites monitored	Live coral reef cover in Turneffe has been rated as fair for the past six years
	Mangroves	No threshold exist for mangrove coverage, but Turneffe has 11,000 ha of mangroves	Turneffe has 11,000 ha of mangroves	Overall, the rate of mangrove deforestation in Belize is 5% annually.
	Seagrass	1. No threshold exist for seagrass coverage in Turneffe. 2. Healthy seagrass ecosystem is indicated by 50–60% under-ground biomass.	1. Approximately 67% coverage of shallow areas of TAMR support seagrass meadows. 2. Below-ground biomass for Turneffe is between 46–58% (Indicating a healthy seagrass ecosystem)	Seagrass areas of Turneffe Atoll are in very good condition, with minimal human impacts, restricted to scarring of the seagrass beds in shallow areas of high boat activity, and limited dredging impacts in isolated development areas and fishing camps (MAP 2011).

Value	Major values	Thresholds	Conditions	Trends
Natural values	Marine fish	1. Commercial fish biomass categories for MAR (g/100 m^2). Critical (< 390); Poor (391–799); Fair (800–1,209); Good (1,210–1,619); Very Good (> 1,620) 2. Herbivorous fish biomass categories (g/100 m_2) Critical (< 990); Poor (991–1,859); Fair (1,860–2,739); Good (2,740–3,290); Very Good (> 3,290) 3. Reproductive threshold for adult queen conch – 100 conch/hectare 4. Threshold for lobster needs to be established. Tail weight – 4 oz, Carapace length – 3 inches 5. Threshold for the various species of spawning fish needs to be established.	1. HRI Report card for commercial fish (Groupers and Snappers) biomass for Turneffe – 483 g/100 m^2 (Poor) 2. TAMR Management Plan 2023–2027 – Herbivorous fish biomass = 2,415 g/100 m^2 (Fair rating) 3. TAMR Management Plan 2023–2027 for lobster 4. 2023 conch surveys in TAMR	Historical information shows a decreasing trend in all commercial fish species listed here.
Ecosystem Services	Fish as a source of food security	Thresholds for fish as food security for fishing communities that depend on Turneffe has not been established.	No data.	No data.
	The livelihoods of fishers are secured through the effective management of Turneffe Atoll Marine Reserve	1. Commercial fish (Groupers and Snappers) biomass categories for MAR (g/100 m^2). Critical (< 390); Poor (391–799); Fair (800–1,209); Good (1,210–1,619); Very Good (> 1,620)	1. HRI Report card for commercial fish (Groupers and Snappers) biomass for Turneffe – 483 g/100 m^2 (Poor)	Historical information shows a decreasing trend in all commercial fish species listed here.

Value	Major values	Thresholds	Conditions	Trends
Ecosystem Services	Opportunities for ecotourism	Limits of Acceptable Change study for Turneffe is needed to establish threshold for the different categories of visitor use (diving, snorkelling, sports fishing)	1. Approximately 17 tour operators and 85 tour guides are directly benefitting from the management of Turneffe. 2. Around 9,000 divers, 1,000 snorkelers, and 1,500 sports fishers were recorded in 2019.	Visitors to Turneffe had increased by 30–40% within the 5-year period leading up to Covid. Post Covid (2023) visitation recorded was between 7,000– 8,000.
Cultural Values	Traditional fishing	No data.	No data.	No data.

Turneffe is threatened by destructive coastal development, overfishing, and climate change. Unregulated construction activities, including mangrove clearance and dredging, significantly impact critical habitats, leading to increased erosion and sedimentation. Overfishing, including the depletion of Nassau grouper and spiny lobster populations, threatens the ecological balance and sustainability of the local fisheries. Additionally, it is possible that the invasive lionfish is causing disruptions in the food chain. The effects of climate change, particularly coral bleaching and stronger storm surges, further jeopardize the resilience of the atoll's marine ecosystems.

5. IUCN Green List Standard

5.1 What is the IUCN Green List Standard?

The IUCN Green List of Protected and Conserved Areas is a global sustainability standard designed to enhance the effectiveness and equity of protected and conserved areas (PCAs). Developed by the International Union for Conservation of Nature (IUCN), the Green List Standard serves as an international benchmark for well-managed and successfully governed areas that deliver positive conservation outcomes while ensuring fair and inclusive governance.

The Green List Standard provides a structured framework for assessing and improving the management of protected and conserved areas, ensuring they meet high-quality conservation and governance criteria. It is voluntary but widely recognized as a best-practice pathway system that aligns with global conservation targets, such as the Convention on Biological Diversity (CBD) Target 3 (30x30 Goal) and the United Nations Sustainable Development Goals (SDGs), particularly SDG 14 (Life Below Water) and SDG 15 (Life on Land).

5.2 Core components of the IUCN Green List Standard

The IUCN Green List Standard evaluates PCAs based on four key components, which encompass a total of 17 criteria and 50 indicators:

1. Good Governance – Ensuring transparency, legitimacy, participation, and adaptability in decision-making.
2. Sound Design and Planning – Defining conservation values, setting long-term goals, and ensuring effective spatial planning.
3. Effective Management – Implementing strategies, monitoring performance, and ensuring law enforcement for conservation success.
4. Successful Conservation Outcomes – Demonstrating positive impacts on biodiversity, ecosystem services, and cultural values.

Each protected or conserved area undergoes a rigorous assessment process, evaluating how well it meets these criteria and whether its management and governance practices align with global best standards.

5.3 The Green List process (towards Certification)

The Green List process follows a phased approach, involving multiple stakeholders, technical reviews, and independent evaluations. See below and Figure 6.

1. Self-assessment
    - Site assess their performance using the IUCN Green List GL-IBEX tool.
    - Site managers identify gaps and prioritize areas for improvement.

2. Expert review & stakeholder engagement
    - An Expert Assessment Group for the Green List (EAGL), consisting of conservation professionals, conduct the assessment.
    - Stakeholder consultations ensure participatory governance and validation of conservation effectiveness.
3. Third-party verification
    - Independent reviewers verify the assessment results, ensuring compliance with the Green List Standard.
    - Areas that meet the criteria are recommended for pathway.
4. Official Green List recognition
    - Certified sites receive Green List status, publicly recognizing their high conservation performance.
    - Pathway is valid for five years, with periodic reviews to ensure continued compliance.

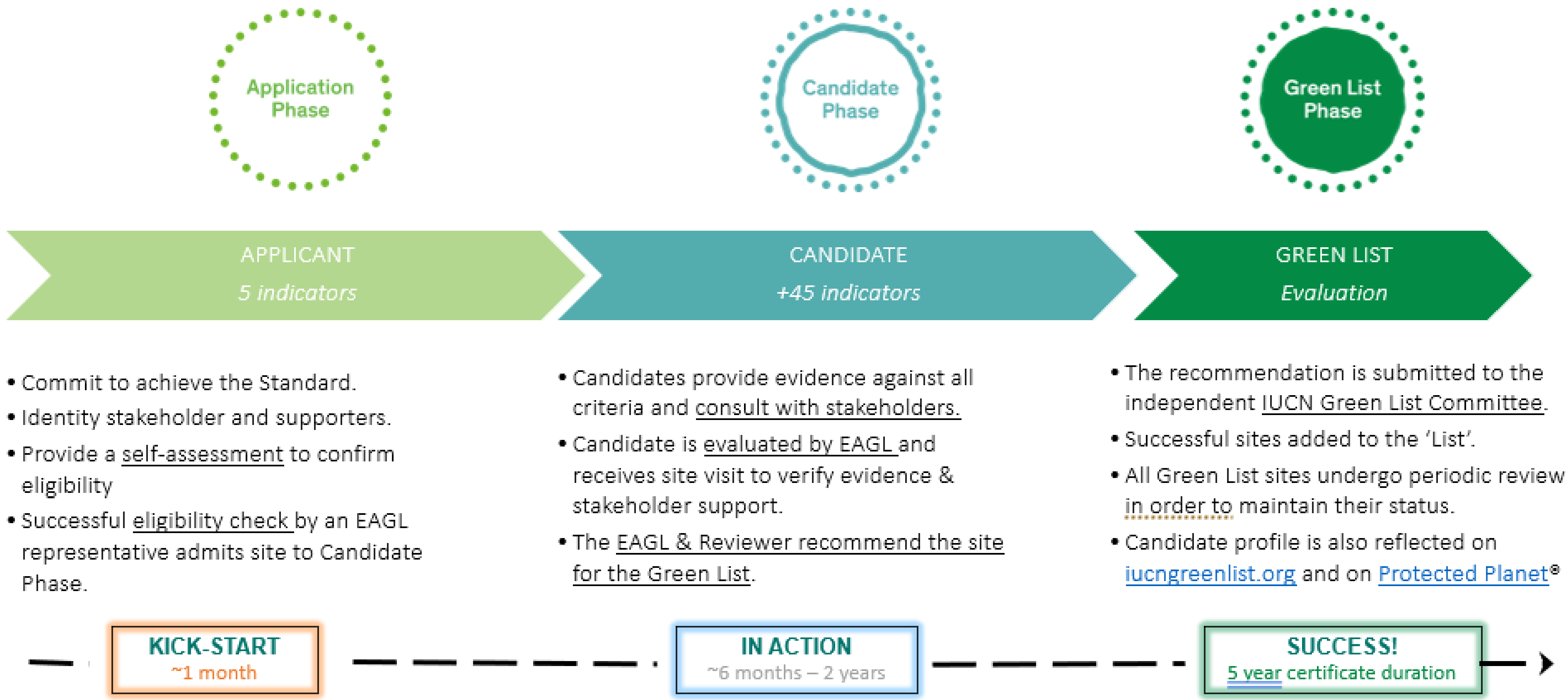

Figure 6. The Green List process split into Application, Candidate and Green List phases as described in Section 5.3.

6. Green List GL-IBEX assessment 2025

6.1 Green List GL-IBEX: Methodology and Role in the IUCN Green List Process

The Green List GL-IBEX tool is a dedicated self-assessment and benchmarking mechanism developed by IUCN to support the Green List participating sites in engaging with the IUCN Green List of Protected and Conserved Areas. The first test of the Green List GL-IBEX v.0 was conducted within the framework of the OCPP Project Phase I during the self-assessment exercise of the 14 MPAs in Belize in 2024.

The Green List GL-IBEX is designed to help PCA managers and stakeholders assess their performance against the Green List Standard, identify areas for improvement, and facilitate the verification process required for Green List pathway.

The assessment is based on a set of qualitative and quantitative indicators, allowing PCA managers to critically analyse strengths and weaknesses. The tool applies a rapid diagnostic approach, which enables protected areas to benchmark their current status and receive targeted recommendations for improvement.

6.2 Overview of the IUCN Green List GL-IBEX Results

The update of the GL-IBEX assessment should not be interpreted necessarily as an indication of progress between 2023 and 2024, when the first assessment was conducted. Instead, it reflects the fact that, during this workshop, participants developed a clearer understanding of how to use the GL-IBEX tool to assess the alignment of their MPAs with the Green List Standard. As such, there is no intent to compare the first and second assessments, as differences in results are primarily due to an improved grasp of the methodology rather than actual changes in site performance.

Across all MPAs, the overall assessment results appear similar, which is expected given that these sites face comparable conditions and are managed in a similar fashion (Table 11). However, Component 4 (conservation outcomes) consistently scores lower, likely due to two key factors:

(1) a lack of sufficient data to fully understand and measure the status of natural and cultural values, or

(2) challenges in identifying, gathering, and analysing existing data, which may be dispersed and not readily available at the time of the assessment.

A key issue is that many MPAs are unable to determine whether they meet conservation thresholds due to the absence of a structured system to measure success and a lack of data to evaluate conservation outcomes, particularly for natural values. This is despite relatively high self-evaluation scores in other components. Such discrepancies indicate potential biases in how results are interpreted, influenced by differing perspectives in self-assessment and variations in the availability of supporting information.

Table 11. Overview of scoring for the five protected areas.

Score Criteria	Blue Hole NM (2024)	Corozal Bay WS	Glovers Reef MR	Half Moon Caye NM	Turneffe Atoll MR
GL-IBEX 2025 overall score	**71**	**65**	**57**	**93**	**76**
1. Good Governance	**98**	**95**	**60**	**100**	**100**
1.1 Guarantee Legitimacy and Voice	100	100	57	100	100
1.2 Achieve Transparency and Accountability	100	90	40	100	100
1.3 Enable Governance Vitality and Capacity to Respond	94	97	81	100	100
2. Sound Design and Planning	**98**	**89**	**76**	**93**	**100**
2.1 Identify and Understand Major Site Values	100	90	90	100	100
2.2 Design for Long-Term Conservation of Major Site Values	100	80	100	100	100
2.3 Understand Threats and Challenges to Major Site Values	100	88	56	81	100
2.4 Understand Social and Economic Context	90	90	54	90	100
3. Effective Management	**80**	**77**	**75**	**97**	**82**
3.1 Develop and Implement a Long-Term Management Strategy	77	68	70	82	55
3.2 Manage Ecological Condition	100	79	67	100	67
3.3 Manage Within Social and Economic Context of the Area	100	100	50	100	75
3.4 Manage Threats	50	100	67	100	100
3.5 Effectively and Fairly Enforce Laws and Regulations	94	82	96	100	85
3.6 Manage Access, Resources Use and Visitation	97	73	78	95	94
3.7 Measure Success	40	40	100	100	100

Score Criteria	Blue Hole NM (2024)	Corozal Bay WS	Glovers Reef MR	Half Moon Caye NM	Turneffe Atoll MR
4. Successful Conservation Outcomes	**8**	**0**	**17**	**83**	**21**
4.1 Demonstrate Conservation of Major Natural Values	0	0	25	50	50
4.2 Demonstrate Conservation of Major Associated Ecosystem Services	25	0	25	100	13
4.3 Demonstrate Conservation of Cultural Values	0	0	0	100	0

While MPAs generally perform well in governance and planning, there is greater variability in management effectiveness. Many MPAs struggle to demonstrate conservation success because they have not set objectively measurable targets for their key values.

This raises fundamental questions:

- What does success look like for the MPA?
- Has a clear target been established for conservation management?
- If so, has that target or threshold been met?
- What evidence is available to support these achievements?

Without clearly defined and measurable objectives, it becomes difficult for MPAs to assess their own progress.

Additionally, it is important to note that the validation of the Green List GL-IBEX assessment for Blue Hole Natural Monument was not conducted during the workshop. Since the same participants are responsible for managing both Blue Hole NM and Half Moon Caye NM, and given the limited time available, they chose to focus entirely on the validation of Half Moon Caye NM. As a result, the validation of Blue Hole NM remains pending and will need to be addressed in a future session.

Given these factors, caution is warranted when interpreting Green List Standard achievements across sites. Instead of treating the assessment results as a direct comparison between MPAs, they should serve as a foundation for deeper discussions with each site's management team. Differences in scores should not be seen as definitive evaluations of performance, but rather as opportunities for further refinement of conservation targets, improvements and standardization in data collection, and enhanced decision-making processes.

6.3 Green List GL-IBEX results: Blue Hole Natural Monument

This analysis evaluates the BHNM GL-IBEX results against the IUCN Green List Standard.

Total Green List alignment: 70.92% (Figure 7).

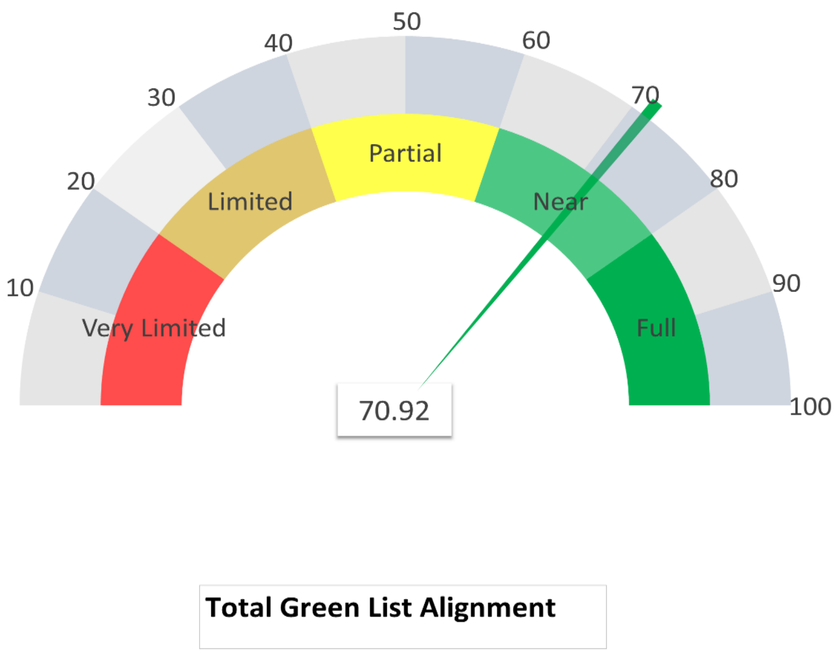

Figure 7. Total Green List Alignment for Blue Hole Natural Monument.

6.3.1 GL-IBEX assessment

The GL-IBEX assessment (2024) for the BHNM highlighted strengths in governance and management while also identifying areas requiring improvements to meet green list criteria fully.

BHNM has a well-defined governance framework that ensures legitimacy, transparency, and inclusivity in decision-making. The governance structures are publicly accessible, and key stakeholders, including local communities and conservation organizations, actively participate in management processes. Decision-making is transparent, and grievance mechanisms are in place to resolve conflicts. However, opportunities exist to further enhance gender equity within governance structures.

From a site design and planning perspective, BHNM meets the IUCN definition of a protected area and has clearly identified conservation values. The site is integrated into a broader conservation network, contributing to regional biodiversity conservation. Spatial planning aligns with conservation priorities, ensuring protection of the area's key ecological features. While planning is robust, improving the integration of climate resilience strategies would enhance long-term site sustainability. Additionally, a more structured assessment of potential threats and their severity would strengthen conservation planning.

The management effectiveness of BHNM is demonstrated through an established management plan that outlines key conservation objectives. Management actions are informed by scientific research and local knowledge, ensuring an evidence-based approach. However, financial sustainability remains a concern, as securing long-term funding mechanisms is an ongoing challenge. While conservation activities are actively implemented, monitoring and evaluation systems need refinement to track progress more effectively. Strengthening adaptive management practices based on monitoring results would further enhance the site's compliance with the Green List Standard.

A significant challenge for BHNM is in demonstrating conservation outcomes. While conservation efforts are in place, there is limited quantitative evidence showcasing long-term biodiversity trends and ecological improvements. The assessment indicates that monitoring systems exist but lack clearly defined performance thresholds to objectively measure conservation success. Additionally, the socio-economic benefits of conservation activities require better documentation to align fully with the expectations.

6.3.2 Key gaps and recommendations for improvement

1. Lack of robust conservation impact monitoring:
    - The site does not have a fully developed system for tracking biodiversity trends and ecological health.
    - Recommendation: Implement standardized performance measures with defined thresholds to assess conservation effectiveness.
2. Challenges in securing long-term financial sustainability:
    - While management is effective, financial planning for future sustainability needs strengthening.
    - Recommendation: Develop a diversified funding strategy, including sustainable financing mechanisms.
3. Gaps in structured monitoring and reporting:
    - Current monitoring efforts require greater consistency to align with green list criteria.
    - Recommendation: Establish a clear monitoring framework with systematic data collection and reporting protocols.
4. Need for enhanced climate adaptation strategies:
    - While conservation planning is strong, climate resilience measures should be more explicitly integrated.
    - Recommendation: Incorporate climate adaptation strategies into management planning to mitigate long-term environmental changes.
5. Greater engagement of stakeholders in conservation planning:
    - While stakeholder participation exists, more structured involvement in decision-making could enhance outcomes.
    - Recommendation: Expand stakeholder consultation processes and promote community-driven conservation initiatives.

Overall, BHNM performs well in governance, planning, and management effectiveness, but improvements are required in conservation impact documentation. Strengthening biodiversity monitoring, securing financial stability, and refining conservation reporting will be essential steps toward achieving green list recognition. Addressing these areas will solidify BHNM's role as a leading example of marine conservation in the region.

Green List alignment by component is shown in Figure 8.

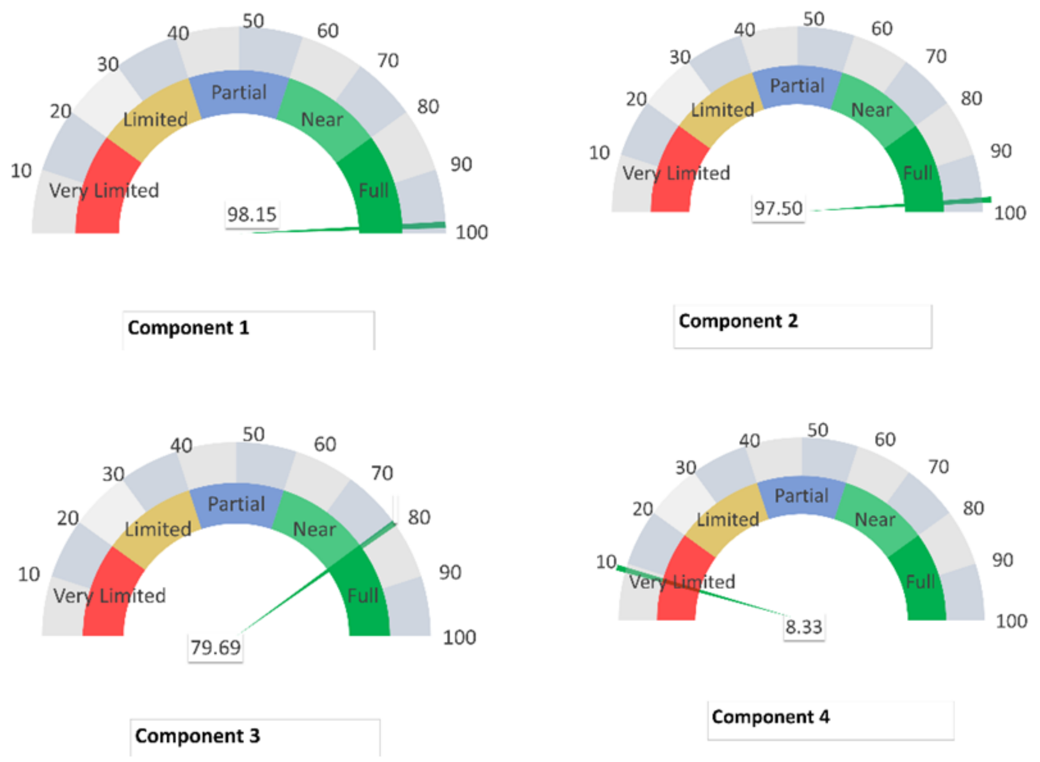

Figure 8. Green List Alignment by Component for Blue Hole Natural Monument.

6.4 GL-IBEX results: Corozal Bay Wildlife Sanctuary

This analysis evaluates the CBWS GL-IBEX results against the IUCN Green List Standard.

Total Green List alignment: 65.31% (Figure 9).

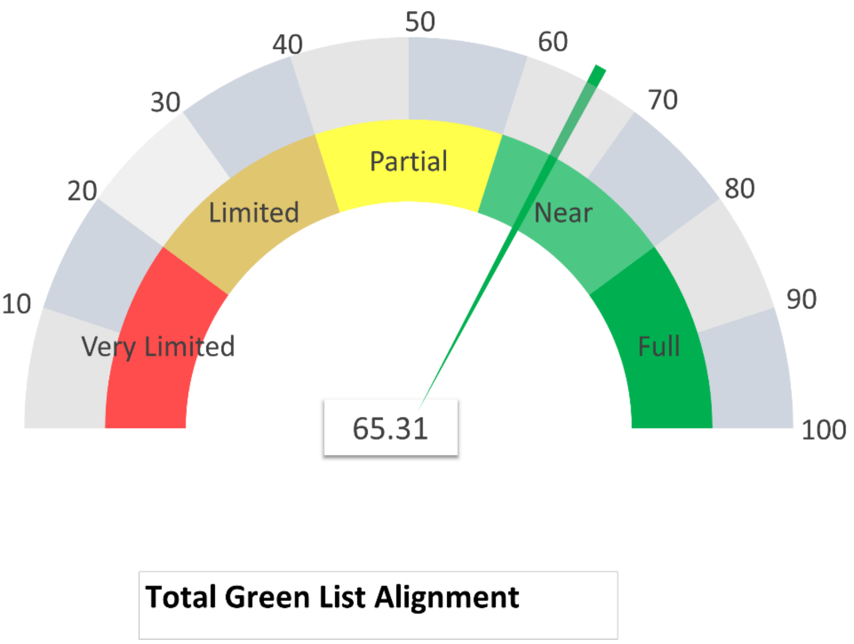

Figure 9. Total Green List Alignment for Corozal Bay Wildlife Sanctuary.

6.4.1 GL-IBEX assessment

The GL-IBEX assessment for CBWS highlights both strengths and areas for improvement, providing insight into the sanctuary's governance, planning, management effectiveness, and conservation outcomes.

CBWS demonstrates strong governance, particularly in ensuring legitimacy, transparency, and stakeholder participation. The governance structure is clearly defined and functions effectively, meeting Green List requirements with high compliance. Transparent frameworks and decision-making processes are in place, ensuring inclusivity and community involvement. The site is fully aligned with governance standards, reinforcing its credibility as a protected area.

The assessment of design and planning reveals that CBWS meets IUCN's definition of a protected area and has well-documented site values and threats. The spatial planning is aligned with conservation objectives, and a structured management plan guides the site's long-term sustainability. Although largely compliant with Green List standards, minor improvements could be made in integrating climate resilience and adaptive planning strategies.

In terms of management effectiveness, CBWS has a functional management plan that outlines key natural and cultural values, along with conservation objectives. However, resource mobilization remains an area for improvement, as financial planning for long-term sustainability is not fully developed. Management actions are being implemented, but systematic reporting and monitoring of effectiveness need to be strengthened. The site is near full alignment with Green List standards but would benefit from enhancements in financial planning and structured impact assessments.

The greatest challenge identified in the GL-IBEX assessment pertains to conservation outcomes. The results indicate that CBWS lacks clear evidence of its conservation impact, failing to meet Green List requirements in this component. There is limited documentation (or it is not readily available or systematically analysed) on biodiversity trends, ecosystem services, and the social and economic benefits the site provides. The absence of measurable indicators for conservation effectiveness highlights a significant gap that must be addressed to achieve full Green List compliance.

6.4.2 Key gaps and recommendations for improvement

1. Limited evidence of conservation outcomes:

    - CBWS's management plan is being updated. This could represent an opportunity to include key aspects related to the Green List Standard, for example, monitoring programs of the site's values.
    - CBWS lacks clear data on biodiversity trends and ecosystem services, making it difficult to assess conservation effectiveness.
    - Recommendation: Establish a structured biodiversity monitoring program with measurable indicators.

2. Insufficient financial planning for long-term sustainability:

    - While management actions are being implemented, financial sustainability is not well defined.

- More staff, training, equipment and infrastructure are needed.
- Financial constraints are threatening the capacity of management to achieve the site's objectives.
- Recommendation: Develop and implement a long-term financial strategy, including diversified funding sources.

3. Weak systematic monitoring and reporting:
    - Monitoring efforts lack consistency and alignment with Green List requirements.
    - Recommendation: Strengthen impact assessment frameworks and ensure regular reporting on conservation effectiveness.
4. Limited integration of connectivity and climate resilience strategies:
    - Adaptive management strategies for climate change are underdeveloped.
    - Strategies are needed to improve PA connectivity with coastal ecosystems, mangroves and rivers.
    - Recommendation: Integrate climate resilience and connectivity strategies into management planning to mitigate potential threats.
5. Gaps in community engagement and sustainable use strategies:
    - While stakeholder participation exists, sustainable use frameworks need enhancement.
    - Improvements are required to manage access, resource use and visitation linked to the site.
    - Recommendation: Expand community engagement initiatives and strengthen sustainable resource use guidelines.

Overall, CBWS aligns well with governance, planning, and management effectiveness criteria, while significant improvements are needed in demonstrating conservation outcomes. Strengthening long-term biodiversity monitoring, ensuring financial sustainability, and improving conservation impact reporting will be critical steps toward achieving Green List recognition. With these enhancements, CBWS has the potential to serve as a model for well-managed protected areas in the region.

Green List alignment by component:

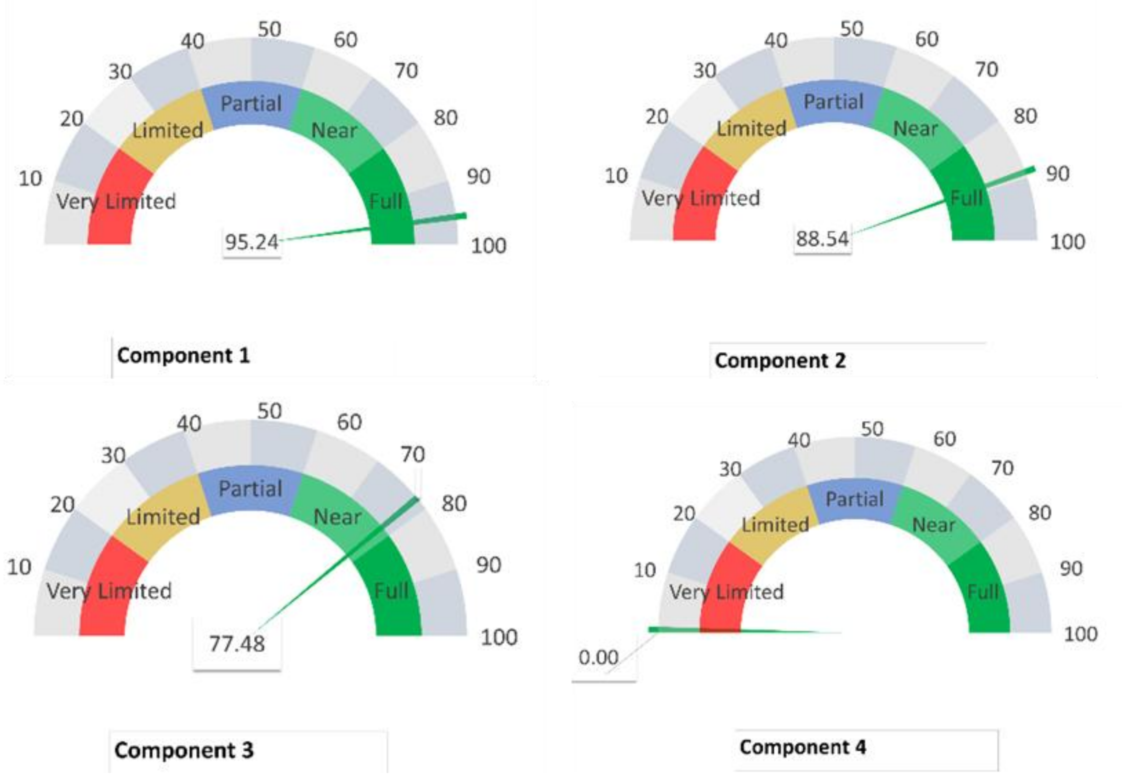

Figure 10. Green List Alignment by Component for Corozal Bay Wildlife Sanctuary.

6.5 GL-IBEX results: Glover's Reef Marine Reserve

This analysis evaluates the GRMR GL-IBEX results against the IUCN Green List Standard.

Total Green List alignment: 56.98% (Figure 11).

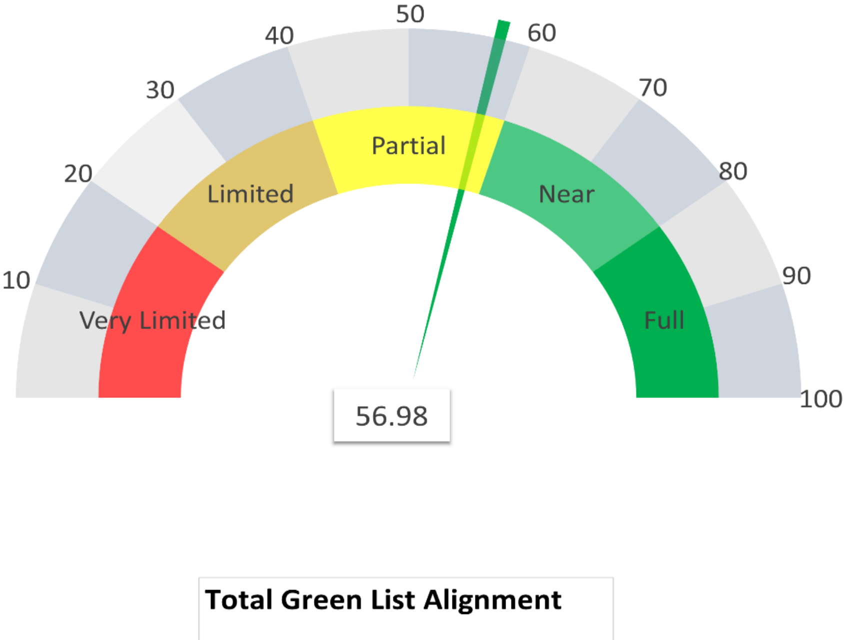

Figure 11. Total Green List Alignment for Glover's Reef Marine Reserve.

6.5.1 GL-IBEX assessment

The GL-IBEX assessment for GRMR exhibits a strong governance structure, ensuring legitimacy, transparency, and inclusivity in decision-making. Governance mechanisms are clearly defined, and stakeholder participation is actively promoted, reinforcing the site's credibility as a well-managed marine reserve. Transparency measures are robust, and key stakeholders are involved in governance processes, supporting alignment with Green List expectations.

In terms of site design and planning, GRMR meets the IUCN definition of a protected area and has comprehensive documentation of ecological values and threats. Spatial planning is well integrated into conservation objectives, supported by a structured management plan that underpins the long-term sustainability of the site. While the planning framework largely meets Green List requirements, further emphasis on climate adaptation strategies would enhance resilience to environmental changes.

About management effectiveness, GRMR benefits from a structured management plan that addresses natural and cultural values while defining conservation targets. However, resource allocation for long-term sustainability remains an area requiring attention, as financial security is not fully assured. While management actions are being implemented, monitoring mechanisms need improvement to ensure systematic data collection and reporting on conservation effectiveness. Although the site demonstrates near full compliance with Green List Standard, better integration of financial strategies and enhanced performance assessments would strengthen its standing.

A significant challenge for GRMR is demonstrating conservation outcomes. The GL-IBEX evaluation indicates a gap in systematically measuring biodiversity trends and ecosystem services, which limits the ability to assess conservation impact. The lack of clearly documented progress in ecological health, social benefits, and economic contributions ensures alignment with Green List Standard. Addressing this gap will be crucial in moving toward full compliance with the Standard.

6.5.2 Key gaps and recommendations for improvement

1. Demonstrate equitable and effective governance:

    - The site's governance structures and mechanisms need to improve and engage with stakeholders and rights-holders to participate in management planning and actions.

    - The site's administration needs to make efforts to include women within the staff and in decision-making processes.

    - Decisions made by the site's governance structure needs to be available. There is no grievance mechanism in place.

    - Recommendation: Incorporate governance improvement strategies among the site's management plan.

2. Insufficient documentation of conservation impact:

    - GRMR's management plan is being updated. This could represent an opportunity to include key aspects related to the Green List Standard like monitoring programs of the site's values, climate change measure and social and economic benefits assessments.

- GRMR lacks well-defined data on biodiversity trends and ecosystem benefits, making it difficult to quantify conservation success.
- Recommendation: Develop a comprehensive monitoring framework with measurable indicators.

3. Gaps in long-term financial sustainability:
    - Despite ongoing management efforts, a long-term financial plan remains underdeveloped.
    - More staff, training, equipment and infrastructure are needed.
    - Financial constraints are threatening the capacity of management to achieve the site's objectives.
    - Recommendation: Establish a diversified financing strategy to support the reserve's operations.
4. Inconsistencies in monitoring and data reporting:
    - Conservation monitoring lacks the consistency required for Green List compliance.
    - Recommendation: Strengthen the impact assessment framework and ensure regular reporting on ecological trends.
5. Limited climate resilience measures:
    - While management is strong, climate adaptation strategies require more attention.
    - Recommendation: Incorporate climate resilience into planning and management activities.
6. Enhancing community engagement and sustainable use approaches:
    - Community participation exists but could be better structured within a sustainability framework.
    - Improvements are required to manage access, resource use and visitation linked to the site.
    - More strategic actions are required to manage threats and enhance social and economic benefits linked to the site.
    - Recommendation: Expand initiatives that support community-led conservation and sustainable resource management.

Overall, GRMR is well-aligned with governance, planning, and management effectiveness criteria, but improvements are needed in conservation impact documentation (Figure 12). Advancing biodiversity monitoring, securing financial sustainability, and strengthening conservation reporting will be critical steps toward full Green List recognition. Addressing these areas will further establish GRMR as a leading example of a well-managed marine reserve in the region.

Green List alignment by component:

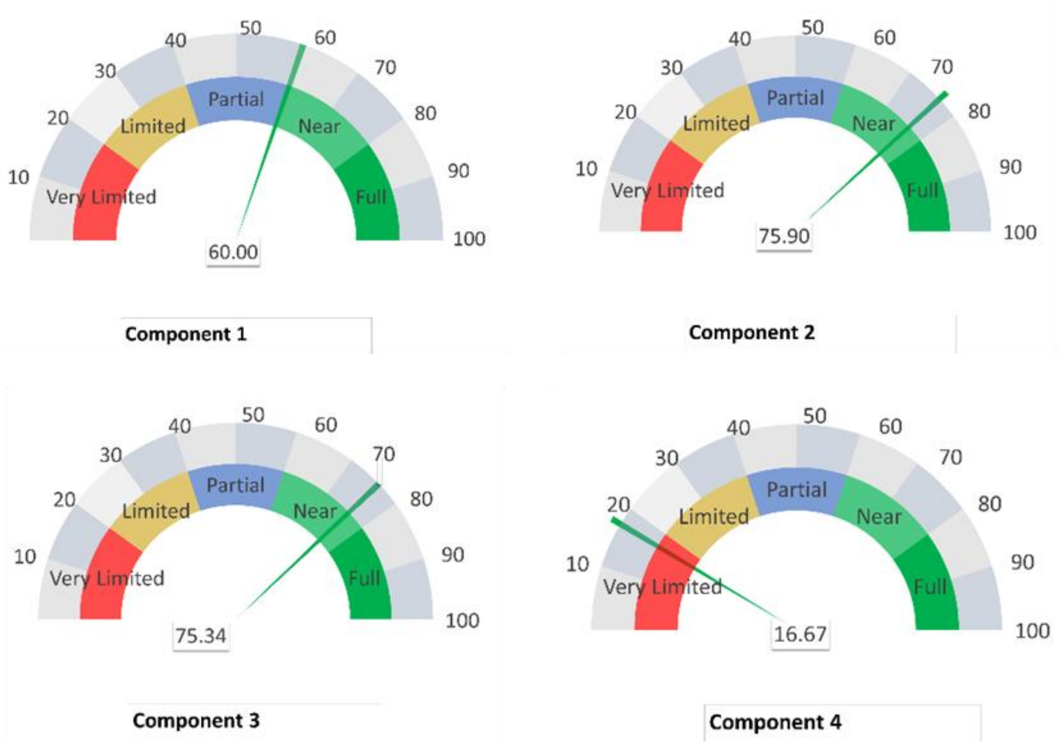

Figure 12. Green List Alignment by Component for Glover's Reef Marine Reserve.

6.6 GL-IBEX results: Half Moon Caye Natural Monument

This analysis evaluates the HMCNM GL-IBEX results against the IUCN Green List Standard.

Total Green List alignment: 93.22% (Figure 13).

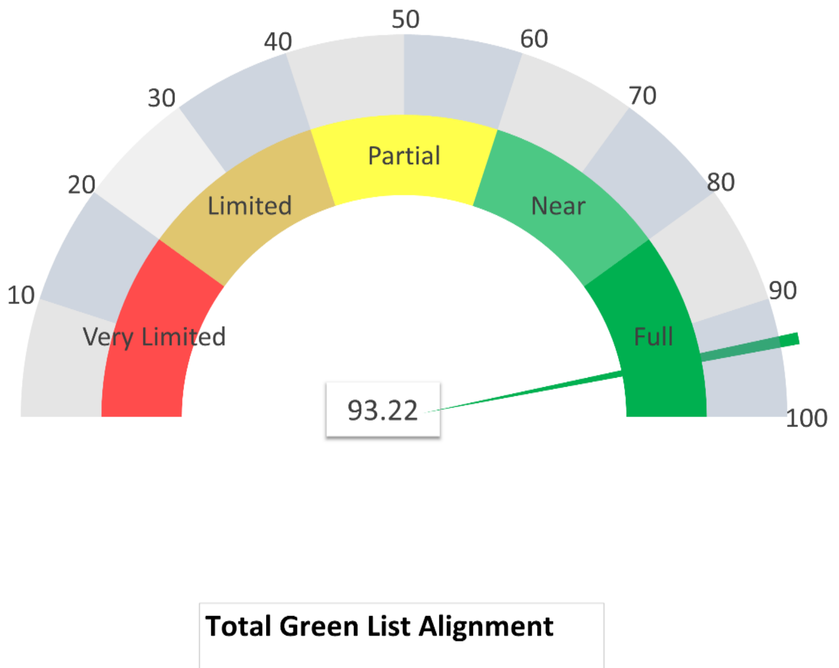

Figure 13. Total Green List Alignment for Half Moon Caye Natural Monument.

6.6.1 GL-IBEX assessment

HMCNM has a well-structured governance framework, ensuring legitimacy, transparency, and inclusivity in decision-making processes. Stakeholders, including local communities and conservation organizations, participate actively in management processes, and decision-making is transparent. Key documents and governance mechanisms are publicly accessible, contributing to accountability. However, there are opportunities to enhance gender equity within governance structures to further align with best practices.

From a site design and planning perspective, HMCNM meets the IUCN definition of a protected area, with well-documented conservation values and management objectives. The site is integrated into a broader conservation network, supporting biodiversity at a regional level. Spatial planning aligns with conservation goals, and connectivity with other protected areas enhances ecosystem resilience. While the management plan is comprehensive, strengthening climate resilience strategies and further detailing threat assessments would improve long-term planning.

The management effectiveness of HMCNM is demonstrated through a structured conservation approach that integrates scientific research and local knowledge. The site has an established management plan that outlines clear objectives and priority actions. However, securing long-term financial sustainability remains a challenge, as the reserve lacks a diversified financial strategy. While conservation actions are being implemented, monitoring and evaluation systems should be further refined to track progress systematically and support adaptive management.

A primary challenge for HMCNM lies in demonstrating conservation outcomes. The assessment indicates that while habitat and species monitoring is in place, there is limited quantitative evidence showcasing long-term biodiversity trends and ecosystem health improvements. Performance indicators exist, but they require clearer threshold values to objectively measure conservation success. Additionally, socio-economic benefits and cultural value conservation efforts need better documentation to fully meet green list expectations.

6.6.2 Key gaps and recommendations for improvement

1. Limited quantitative conservation impact monitoring:
    - While some monitoring efforts exist, structured performance metrics are needed.
    - Recommendation: Develop standardized impact indicators and monitoring thresholds for conservation outcomes.
2. Challenges in financial sustainability:
    - The site requires a more robust financial plan to ensure long-term conservation funding.
    - Recommendation: Establish a diversified funding approach, including sustainable finance mechanisms.
3. Inconsistent monitoring and reporting structures:
    - Monitoring data collection and analysis require refinement.

   - Recommendation: Enhance systematic impact assessments and ensure structured conservation reporting.

4. Climate adaptation measures need further integration:
   - While management planning is strong, climate resilience strategies should be emphasized.
   - Recommendation: Incorporate adaptive climate planning into management strategies to mitigate long-term environmental threats.

5. Opportunities for broader stakeholder engagement:
   - While stakeholder participation exists, it could be further strengthened.
   - Recommendation: Expand consultation mechanisms and community-led conservation initiatives to support inclusive decision-making.

Overall, HMCNM exhibits strong governance, effective planning, and structured management but requires improvements in conservation impact assessment. The GL-IBEX verification resulted the highest scores of 93.22% so far in terms of the Green List Standard alignment (Figure 14).

Green List alignment by component:

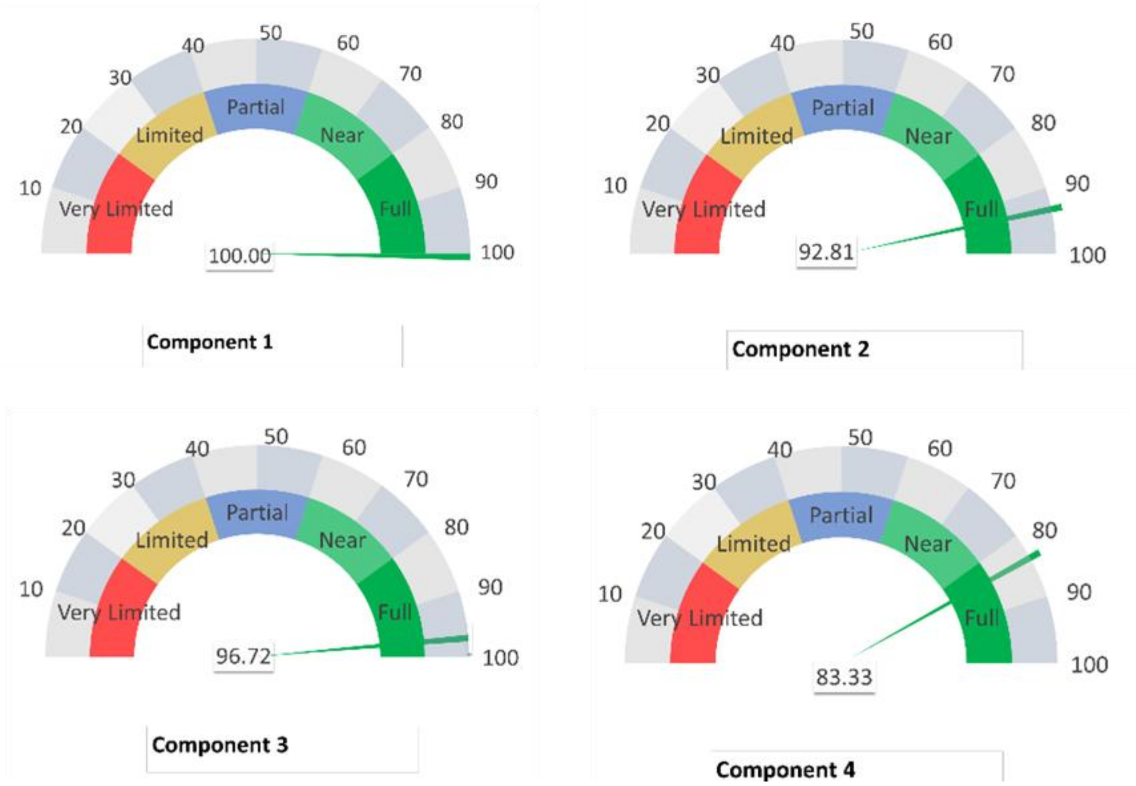

Figure 14. Green List Alignment by Component for Half Moon Caye Natural Monument.

6.7 GL-IBEX results: Turneffe Atoll Marine Reserve

This analysis evaluates the TAMR GL-IBEX results against the IUCN Green List Standard.

Total Green List alignment: 75.75% (Figure 15).

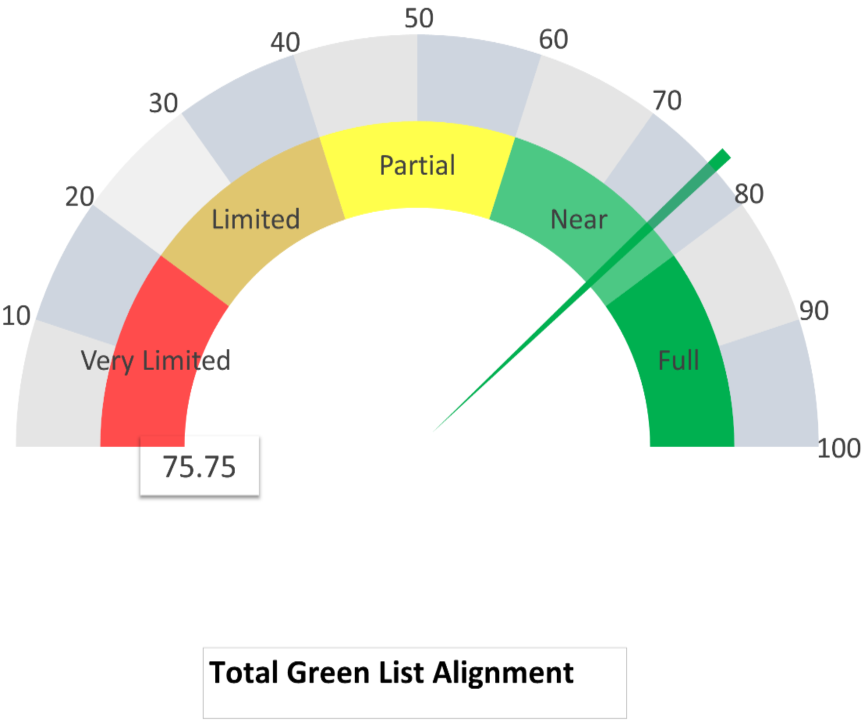

Figure 15. Total Green List Alignment for Turneffe Atoll Marine Reserve.

6.7.1 GL-IBEX assessment

In terms of Good Governance Component, TAMR has a strong governance framework that supports legitimacy, transparency, and inclusive decision-making. The governance mechanisms are well-structured, ensuring that stakeholder engagement plays a central role in the reserve's management. Transparency is upheld through well-defined protocols, and key stakeholders are actively involved in governance processes. These factors position TAMR as a promising candidate for green list recognition.

Regarding site design and planning, TAMR meets the IUCN criteria for a protected area and has thorough documentation of its ecological significance and associated risks. The reserve's spatial planning aligns well with its conservation goals, supported by a well-established management plan aimed at ensuring long-term ecological sustainability. While the design is largely in line with green list expectations, strengthening climate adaptation measures could further enhance the resilience of the atoll against environmental changes.

The effectiveness of management at TAMR is evident in its structured conservation planning, which outlines key ecological and cultural values. However, securing sustainable financial resources remains an area needing attention, as long-term funding strategies are not yet fully developed. Conservation activities are actively carried out but monitoring strategies and data collection practices require refinement to ensure consistent assessment of conservation progress. Meanwhile, enhancing financial planning and improving conservation impact assessments will further strengthen its position.

One of the primary challenges for TAMR is demonstrating clear conservation outcomes. The GL-IBEX assessment indicates that systematic tracking of biodiversity trends and ecosystem services is not sufficiently developed, which creates difficulties in measuring conservation success. The lack of clearly documented ecological improvements and socio-economic contributions is a barrier to achieving full compliance with the Green List Standard. Addressing these shortcomings will be essential in advancing TAMR's candidacy.

6.7.2 Key gaps and recommendations for improvement

1. Incomplete conservation impact tracking:

    - TAMR lacks a comprehensive framework for monitoring biodiversity trends and ecosystem functions.

    - TASA needs more Conservation Officers (Enforcement Rangers) to optimally implement activities). More rangers are needed to enforce laws and regulations in TAMR. Equipment and training are also needed for them.

    - Recommendation: develop and implement a standardized monitoring system with defined performance indicators.

2. Long-term financial sustainability planning is insufficient:

    - Although management efforts are well-executed, the reserve lacks a clearly outlined long-term financial strategy.

    - More human, financial, technical resources are needed to implement more activities described in management plan.

    - More equipment and infrastructure are required.

    - The site faces financial constraints that limit its capacity to conduct planned management activities and achieve the site's objectives.

    - Recommendation: create a diversified funding approach to ensure long-term operational stability.

3. Gaps in systematic data collection and reporting:

    - TASA is currently working on establishing significant baselines, this will guide management strategies to maintain values & the site's ecological processes.

    - There is a need to decrease the number of licensed commercial fishers and increase strategic patrols. The site can show limited success from conservation efforts for some major natural values.

    - More evidence is needed to show that conservation thresholds established for ecosystem services and cultural values are being met or surpassed.

    - Inconsistent monitoring and reporting hinder compliance with the Green List standards.

    - Recommendation: improve data management systems and ensure ongoing documentation of conservation impact.

4. Climate adaptation strategies need enhancement:

   - While the management plan is robust, climate resilience measures should be further strengthened.
   - Recommendation: integrate climate adaptation strategies more comprehensively into conservation planning.

5. Opportunities exist to improve community engagement:

   - Stakeholder participation is present but could be made more effective within a structured sustainability framework.
   - More strategic actions are required to manage threats and enhance social and economic benefits linked to the site.
   - TASA needs to improve facilities for visitors, including accessibility for people with special needs (ramps, lifts etc).
   - Recommendation: expand community-driven conservation initiatives to support both ecological and socio-economic goals.

Overall, TAMR performs well in governance, site planning, and management effectiveness, but additional improvements are needed in conservation impact documentation (Figure 16). By strengthening biodiversity monitoring, ensuring financial stability, and refining conservation reporting, the reserve can take important steps toward achieving green list pathway. These enhancements will help TAMR solidify its role as a leading model for marine conservation in the region.

Green List alignment by Component:

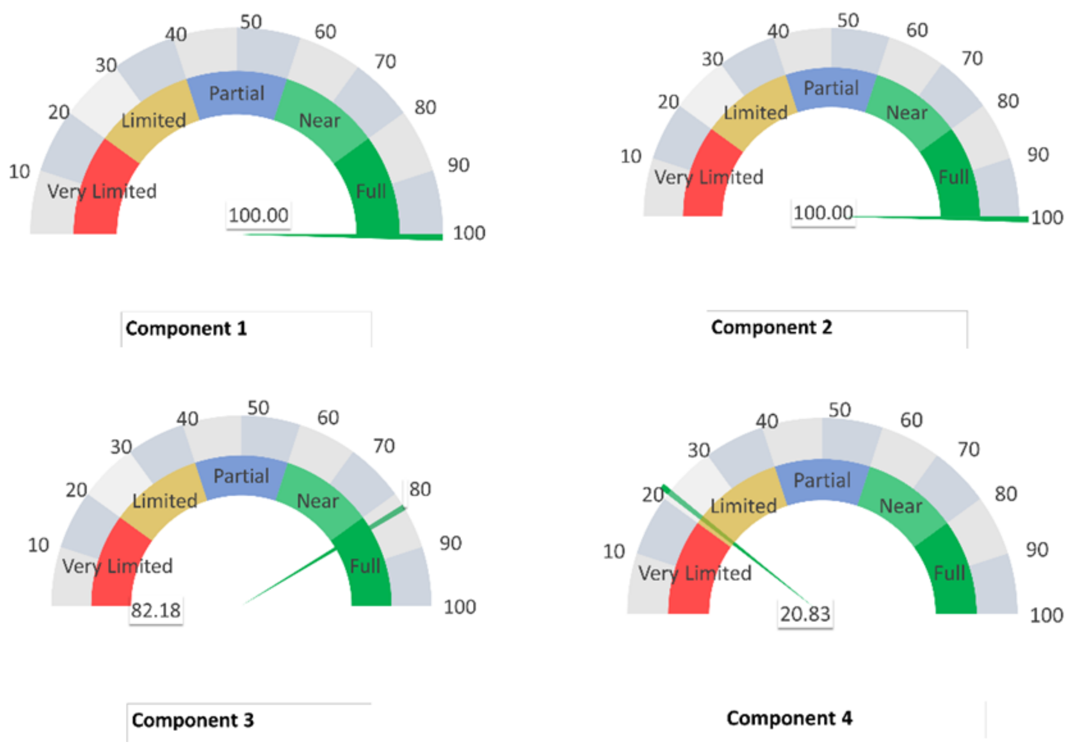

Figure 16. Green List Alignment by Component for Turneffe Atoll Marine Reserve.

7. SMART roadmap to achieve the IUCN Green List pathway

This structured, measurable, and time-bound roadmap outlines the key actions required to achieve IUCN Green List pathway for Glover's Reef Marine Reserve, Turneffe Atoll Marine Reserve, Blue Hole Natural Monument, Corozal Bay Wildlife Sanctuary, and Half Moon Caye Natural Monument.

Actions are time-bound, measurable, and aligned with the Green List criteria to ensure successful pathway by the end of 2026 or early 2027 (Belize Blue Bond timeline). However, while the roadmap is designed to guide these sites toward pathway within the target timeframe, some actions extend beyond 2026. These longer-term actions are essential not only for achieving pathway but also for maintaining Green List status post-pathway, ensuring that conservation effectiveness, governance, and management standards continue to be upheld over time.

The action items outlined in this roadmap are applicable across all five sites, reflecting commonalities identified in the proposed actions by site co-managers. Nevertheless, each site retains the flexibility to prioritize specific actions based on its own identified gaps from the GL-IBEX assessments or those requiring a coordinated approach at the MPA network level. This tailored approach ensures that while all sites follow a common framework, they can adapt the implementation of actions to their unique needs and priorities.

By following this roadmap, the targeted sites will enhance their conservation effectiveness, foster sustainable use of resources, and improve community engagement, ultimately positioning them for successful Green List pathway. The roadmap provides a structured and actionable plan, outlining clear responsibilities, budgets, and timelines to guide co-site managers, stakeholders, and conservation partners through the pathway process.

The estimated budgets presented in this roadmap are based on feedback from workshop participants and reflect general cost estimates for implementing necessary actions. **It is important to note that some of these budgetary requirements may already be covered within the operational costs of specific MPAs, while others may require additional funding sources. It is also important to note that the budget estimate provided is not the final amount required to achieve Green List certification. Instead, it serves to emphasize the importance and necessity of implementing proper management practices.**

The roadmap itself has been designed in alignment with the insights and priorities identified by participants through the roadmap template filled during the workshop. This ensures that the proposed actions are grounded in site-specific realities and stakeholder input, making them both relevant and achievable within the given timeframe.

7.1 Component 1. Good Governance

Focus: Strengthening governance structures, stakeholder engagement, and decision-making processes.

7.1.1 Component 1.1: Guarantee Legitimacy and Voice

7.1.1.1 Co-management Structure

- Establish formal co-management arrangements involving local communities, government agencies, and conservation organizations.

- **Timeline**: By Quarter 2 2025
- **Responsible**: Belize Fisheries Department, Forest Department/National Biodiversity Office, site managers, co-management organizations, local communities
- **Verification**: co-management arrangements
- **Budget**: US$ 8,000 per site

7.1.1.2 Enhance Stakeholder Engagement and Co-management Frameworks

- Conduct quarterly stakeholder consultations.
- Establish participatory forums for local communities and right-holders, including gender-balanced representation.
- **Timeline**: Quarter 2 2025 – ongoing
- **Responsible**: Belize Fisheries Department, site managers, co-management organizations, local communities
- **Verification**: Meeting minutes, stakeholder agreements, community forum records
- **Budget**: US$ 20,000 (annual stakeholder engagement activities)

7.1.1.3 Exchanges and Dialogues for Indigenous and Local Leaders

- Conduct targeted dialogues with the Indigenous and local leaders in governance and decision-making processes
- **Timeline:** Quarter 3 2025 (once a year for each MPA)
- **Responsible:** Site managers, co-management organizations, local communities, local NGOs
- **Verification:** Training reports, participant lists
- **Budget:** US$ 15,000 (annual training)

7.1.1.4 Recognition and Empowerment of Indigenous Rights

- Amend regulations to allow Garifuna groups to practice traditional ceremonies in MPAs.
- **Timeline**: Q1 2026
- **Responsible**: Government of Belize
- **Verification**: Regulation, decree, edict
- **Budget**: US$ 2,000

7.1.1.5 Integrate Gender and Social Equity Considerations

- Implement gender-inclusive policies and provide capacity-building for women in conservation roles.

- Improve infrastructure to accommodate the needs of diverse stakeholders.
- **Responsible**: Site managers, co-management organizations, local communities, local NGOs, national NGOs
- **Timeline**: Quarter 3 2025 – Q3 2026
- **Verification**: Gender-inclusive policies, infrastructure upgrade
- **Budget**: US$ 15,000 (for each MPA)

7.1.2 Component 1.2: Achieve Transparency and Accountability

7.1.2.1 Public Access to Governance Information

- Develop and disseminate a summarized version of key governance documents.
- **Timeline**: Quarter 1 2025
- **Responsible**: Site managers, co-management organizations, government oversight agencies
- **Verification**: Public reports, governance audits
- **Budget**: US$ 1,000 (per community)

7.1.2.2 Grievance Mechanism

- Develop an online and in-person grievance reporting system.
- **Timeline**: Quarter 2 2025
- **Responsible**: Belize Fisheries Department, site managers, co-management organizations
- **Verification**: Link to online reporting system.
- **Budget**: US$ 2,500

7.1.2.3 Improve Accountability Mechanisms

- Establish independent review committees to evaluate governance performance and stakeholder engagement at each MPA.
- **Timeline:** Quarter 3 2025 / Quarter 3 2026 / Quarter 3 2027
- **Responsible:** Belize Fisheries Department, national NGOs, local NGOs
- **Verification:** Annual governance review reports
- **Budget:** US$ 4,000 (annually)

7.2 Component 2. Sound Design & Planning

Focus: MPA design, ecological representation, and management planning.

7.2.1 Component 2.1: Identify and Understand Major Site Values

7.2.1.1 Update Management Plans

- Improve site planning, ensure climate adaptation strategies, cultural values, and gender equity considerations are included.
- **Timeline**: Q4 2025
- **Responsible**: Belize Fisheries Department, site managers, co-management organizations, national NGOs, local NGOs, local communities and stakeholders
- **Verification**: Approved management plans
- **Budget**: US$ 20,000 (for each MPA)

7.2.1.2 Enhance Zoning and Spatial Planning

- Conduct a gap analysis to identify areas requiring additional protection.
- Implement no-take zones and sustainable use areas based on scientific recommendations.
- **Responsible**: Belize Fisheries Department, site managers, co-management organizations, local NGOs, local communities and stakeholders, conservation planners
- **Timeline**: Q3 2025 – Q2 2026
- **Verification**: Updated zoning maps, policy amendments
- **Budget**: (part of the budget for updating management plans)

7.2.1.3 Enhance Ecosystem Connectivity

- Conduct marine connectivity analysis to establish marine corridors between MPAs.
- **Timeline:** Q1 2026
- **Responsible:** Research and monitoring teams, scientific experts
- **Verification:** Connectivity analysis report, policy recommendations
- **Budget:** US$ 50,000 (Belize MPA network level)

7.2.1.4 Identify and Assess Major Natural, Cultural, and Ecosystem Service Values

- Conduct a comprehensive assessment of natural values (key habitats, species, and ecological functions).
- Map and document ecosystem services provided by each MPA (e.g., fisheries, carbon sequestration, coastal protection).

- Identify cultural values and integrate them into conservation planning.
- Ensure findings are publicly accessible and incorporated into management strategies.
- **Responsible**: Academia, conservation planners, local communities
- **Timeline**: Q3 2025 – Q4 2025
- **Verification**: Published assessment reports, spatial map
- **Budget**: US$ 80,000 (total for all five MPAs)

7.2.1.5 Assess Effectiveness of Existing Conservation Zones

- Compare biodiversity trends and adjust zoning regulations.
- **Timeline:** Q2 2026
- **Responsible:** Scientific experts, co-management organizations
- **Verification:** Zoning impact reports
- **Budget:** US$ 15,000 (for each MPA)

7.2.2 Component 2.2: Integrate Socioeconomic Considerations

7.2.2.1 Sustainable Livelihood

- Develop sustainable livelihood programs for fishers and tourism stakeholders to promote conservation-compatible economic activities.
- **Timeline:** Q4 2025 – Q3 2026
- **Responsible:** Belize Fisheries Department, site managers, co-management organizations, national NGOs, local NGOs, local communities and stakeholders, local business networks
- **Verification:** Sustainable livelihood action plan, financial reports
- **Budget:** US$ 150,000

7.2.3 Component 2.3: Understand Threats and Challenges to Major Site Values

7.2.3.1 Assess climate change impacts

- Conduct climate change vulnerability assessments.
- Establish long-term monitoring programs for climate impacts such as coral bleaching and sea-level rise.
- Develop site-specific adaptation strategies.
- **Timeline**: Q3 2025 – Q2 2026

- **Responsible**: Scientific experts, site managers, co-management organizations, national NGOs
- **Verification**: Climate impact reports, adaptation plans.
- **Budget**: US$ 250,000 (total for all five MPAs)

7.3 Component 3. Effective Management

Focus: Ensuring adequate resources, capacity, and implementation of management strategies.

7.3.1 Component 3.1: Develop and Implement a Long-term Management Strategy

7.3.1.1 Staffing and Capacity Building

- Recruit and train additional rangers.
- **Timeline**: Quarter 3 2025 – Quarter 3 2027
- **Responsible**: Belize Fisheries Department, site managers, co-management organizations
- **Verification**: Hiring records, training modules, training assistance records
- **Budget**: US$ 400,000 (annually, total for all five MPAs)

7.3.1.2 Acquire Essential Equipment

- Procure life jackets, monitoring tech, radar systems, and protective gear.
- **Timeline**: By Quarter 4 2025
- **Responsible**: Site managers, co-management organizations
- **Verification**: Hiring records, equipment purchases receipts
- **Budget**: US$ 100,000 (total for all five MPAs)

7.3.1.3 Ensure Sustainable Financing Mechanisms

- Develop and implement a financial sustainability strategy, including partnerships with the private sector.
- Establish revenue-generation models such as eco-tourism fees.
- **Responsible**: MPA finance teams, government funding bodies
- **Timeline**: Quarter 2 2025 – Quarter 4 2025
- **Verification**: Approved financial plans, revenue reports
- **Budget**: US$ 25,000 (consultancy at the Belize MPA network level)

7.3.2 Component 3.2: Manage Ecological Condition

7.3.2.1 Implement Standardized Monitoring Protocols

- Develop biodiversity monitoring programs and species-specific surveys.
- **Timeline**: Quarter 3 2025
- **Responsible**: Academia, scientific experts, site managers, co-management organizations
- **Verification**: Monitoring plans, survey results
- **Budget**: US$ 200,000 (annually for all five MPAs)

7.3.2.2 Emergency Response Framework

- Develop and implement an emergency response framework for oil spills, coral bleaching, and extreme weather events affecting MPAs.
- **Timeline:** Quarter 3 2026
- **Responsible:** Belize Fisheries Department, Ministry of Blue Economy & Disaster Risk Management, site managers, scientific experts
- **Verification:** Emergency response protocol documents, simulation drill reports
- **Budget:** US$ 120,000 (total for all five MPAs)

7.3.2.3 Adaptive Management Based on Monitoring Data

- Conduct conch, coral reef, and fisheries impact assessments.
- **Timeline**: Quarter 2 2025 – Quarter 1 2026
- **Responsible**: Academia, scientific experts, site managers, co-management organizations
- **Verification**: Assessments
- **Budget**: US$ 200,000 (total for all five MPAs)

7.3.3 Component 3.5: Enforcement of Regulations

7.3.2.3 Expand Surveillance and Patrol Capacity

- Develop integrated patrol plans.
- Acquire and deploy patrol vessels.
- Implement AI-powered monitoring technologies such as automated vessel tracking to enhance compliance with fisheries and MPA regulations.
- **Timeline**: By Quarter 2 2026

- **Responsible**: Belize Fisheries Department, site managers, co-management organizations, technology partners
- **Verification**: Purchase receipts
- **Budget**: US$ 500,000 (total for all five MPAs)

7.3.4 Component 3.6: Manage Access, Resource Use, and Visitation

7.3.4.1 Develop a Tourism Use Plan

- Define permitted activities and improve planning of visitor services.
- **Timeline**: By Quarter 4 2025
- **Responsible**: Tourism Authorities, site managers
- **Verification**: Visitor flow management plan
- **Budget**: US$ 40,000 (for each MPA)

7.3.4.2 Improve Accessibility and Infrastructure

- Install ramps, upgraded toilet facilities, and garbage disposal systems.
- **Timeline**: Quarter 3 2025 – Quarter 3 2026
- **Responsible**: Tourism partners, site managers, co-management organizations
- **Verification**: Hiring records, equipment purchases receipts
- **Budget**: US$ 120,000 (for each MPA)

7.3.5 Component 3.7: Measure Success

7.3.5.1 Develop and Implement a Standardised Monitoring Framework

- Establish a unified system for tracking key biodiversity indicators, ecosystem health, and human impact.
- Establish baseline data for future comparison.
- Train staff in monitoring protocols.
- **Responsible**: Conservation scientists, MPA staff, citizen scientists
- **Timeline**: July 2025 – June 2026
- **Verification**: Annual monitoring reports
- **Budget**: US$ 75,000 (total for all five MPAs)

7.3.5.2 Define and Implement Conservation Thresholds

- Establish performance measures for ecosystem services, natural values, and cultural values.

- Conduct annual assessments to track conservation impacts.
- **Responsible**: Marine ecologists, site managers, co-management organizations
- **Timeline**: Quarter 1 2026 – Quarter 4 2026
- **Verification**: Conservation impact reports
- **Budget**: US$ 200,000 (total for all five MPAs)

7.4 Component 4. Successful Conservation Outcomes

Focus: Achieving measurable biodiversity and social outcomes.

7.4.1 Component 4.1: Demonstrate Conservation of Major Natural Values

7.4.1.1 Expand Climate Change Monitoring

- Track coral bleaching, water quality, ocean acidification, and sea surface temperature.
- Develop a long-term biodiversity baseline dataset to assess changes in ecosystem health over time.
- **Timeline**: Quarter 3 2025 - permanent
- **Responsible**: Academia, scientific experts, site managers, co-management organizations, national NGOs, local NGOs, local communities, fisheries sector
- **Verification**: Annual coral bleaching, water quality, ocean acidification, and sea surface temperature reports
- **Budget**: US$ 120,000 (annual total for all five MPAs)

7.4.1.2 Climate Resilience Hubs

- Establish climate resilience monitoring hubs at selected MPAs to track climate adaptation effectiveness.
- **Timeline:** Quarter 3 2026
- **Responsible:** Marine ecologists, adaptation experts, Belize Fisheries Department, Ministry of Blue Economy & Disaster Risk Management
- **Verification:** Climate resilience impact reports
- **Budget:** US$ 180,000 (total for all five MPAs)

7.4.2 Component 4.2: Demonstrate Conservation of Ecosystem Services

7.4.2.1 Conduct External Review of Ecological Impact

- Assess compliance with conservation performance measures.
- **Timeline**: Quarter 1 2026 – ongoing every second year
- **Responsible**: Consultants, site managers, co-management organisations

- **Verification**: Performance measures reports
- **Budget**: US$ 40,000 (total for all five MPAs)

7.4.2.2 Strengthen Community-based Conservation

- Introduce conservation incentives such as payment for ecosystem services (PES) for local communities actively engaged in protection efforts.
- **Timeline:** Quarter 3 2026
- **Responsible:** Government of Belize, Belize Fisheries Department, Ministry of Blue Economy & Disaster Risk Management
- **Verification:** PES agreements, local beneficiary lists
- **Budget:** US$ 300,000

7.4.3 Component 4.3: Demonstrate Conservation of Cultural Values

7.4.3.1 Define Performance Measures for Cultural Values Conservation

- Develop guidelines to protect cultural heritage and practices.
- **Timeline**: Quarter 3 2025
- **Responsible**: Belize Fisheries Department, site managers, co-management organizations, national NGOs, local NGOs, local communities and stakeholders
- **Verification**: Guidelines
- **Budget**: US$ 10,000 (total for all five MPAs)

7.4.4 Component 4.4: Community Engagement and Conservation Outcomes

7.4.4.1 Promote Community Engagement in Conservation Outcomes

- Develop community-led conservation programs.
- Establish incentive-based conservation initiatives for local fishers and stakeholders.
- **Responsible**: Community outreach officers, site managers, co-management organizations, national NGOs, local NGOs, local communities and stakeholders
- **Timeline**: Quarter 2 2025 – ongoing
- **Verification**: Participation records, program evaluations
- **Budget**: US$ 120,000 (annually for all five MPAs)

7.5 Budget Summary

Table 12 provides an overview of a proposed budget (in US dollars) for proposed activities.

Table 12. Budget Summary.

Component	Criteria	Action	Budget	Observation
Good Governance	1.1	Co-management structure	US$ 8,000	Total for all MPAs
	1.1	Stakeholder engagement activities	US$ 20,000	Annual
	1.1	Capacity-building for Indigenous and local leaders	US$ 15,000	Annual
	1.1	Recognition of Indigenous rights	US$ 2,000	-
	1.1	Integrate gender and social equity considerations	US$ 15,000	Per MPA
	1.2	Public access to governance information	US$ 1,000	Per community
	1.2	Grievance mechanism	US$ 2,500	-
	1.2	Improve accountability mechanisms	US$ 4,000	Annual
Total Component 1			US$ 67,500	
Sound Design & Planning	2.1	Update management plans	US$ 20,000	Per MPA
	2.1	Enhance ecosystem connectivity	US$ 50,000	Network level
	2.1	Identify and assess major site values	US$ 80,000	Total for all MPAs
	2.1	Enhance zoning and spatial planning	-	Included in management plan budget
	2.1	Assess effectiveness of conservation zones	US$ 15,000	Per MPA
	2.2	Develop sustainable livelihood programs	US$ 150,000	-
	2.3	Assess climate change impacts	US$ 250,000	Total for all MPAs
Total Component 2			US$ 565,000	
Effective Management	3.1	Recruit and train additional rangers	US$ 400,000	Annually, total for all MPAs
	3.1	Acquire essential equipment	US$ 100,000	Total for all MPAs
	3.1	Ensure sustainable financing mechanisms	US$ 25,000	Consultancy, network level

Component	Criteria	Action	Budget	Observation
	3.2	Develop biodiversity monitoring programs	US$ 200,000	Annual total for all MPAs
	3.2	Develop emergency response framework	US$ 120,000	Total for all MPAs
	3.2	Adaptive management impact assessments	US$ 200,000	Total for all MPAs
	3.3	Expand surveillance and patrol capacity	US$ 500,000	Total for all MPAs
	3.4	Develop a tourism use plan	US$ 40,000	Per MPA
	3.5	Improve accessibility and infrastructure	US$ 120,000	Per MPA
	3.6	Develop standardized monitoring framework	US$ 75,000	Total for all MPAs
	3.7	Define and implement conservation thresholds	US$ 200,000	Total for all MPAs
Total Component 3			US$ 1,980,000	
Conservation Outcomes	3.7	Expand climate change monitoring	US$ 120,000	Annual total for all MPAs
	4.1	Establish climate resilience hubs	US$ 180,000	Total for all MPAs
	4.1	Conduct external review of ecological impact	US$ 40,000	Total for all MPAs
	4.2	Strengthen community-based conservation	US$ 300,000	-
	4.2	Define performance measures for cultural values conservation	US$ 10,000	Total for all MPAs
	4.3	Promote community engagement in conservation outcomes	US$ 120,000	Annually for all MPAs
Total Component 4			US$ 770,000	
Overall estimation for all Components			US$ 3,382,500	

8. Conclusion

The implementation of the IUCN Green List roadmap for Belize's five selected MPAs represents a significant advancement in the country's commitment to effective and equitable marine conservation.

The findings of the GL-IBEX assessment highlighted both strengths and areas for improvement within Belize's MPA network. Governance and management effectiveness have shown promising results, yet gaps remain in demonstrating measurable conservation outcomes and securing long-term financial sustainability. Conservation success cannot be measured solely through management actions; it requires clear benchmarks for ecological health, structured monitoring frameworks, and sustainable financial mechanisms. Addressing these challenges will be critical to achieving Green List pathway and ensuring that Belize's MPAs contribute meaningfully to global biodiversity targets, including the 30x30 goals.

The roadmap presented in this report provides a structured approach to addressing these challenges through targeted, site-specific actions. At the national level, policymakers should integrate Green List principles into marine spatial planning frameworks, align conservation financing mechanisms with long-term sustainability goals, and enhance regulatory support for evidence-based conservation. Strengthening cross-sectoral collaboration between government agencies, conservation organizations, and private sector stakeholders – including local communities - will be key to ensuring sustained momentum.

At the site level, MPA managers must prioritize strengthening biodiversity monitoring frameworks, ensuring that conservation thresholds are clearly defined and regularly assessed. Additionally, co-management structures should be reinforced to deepen stakeholder participation, particularly among Indigenous and local communities. Sustainable financing mechanisms, including innovative conservation financing models such as ecotourism revenue-sharing and PES, could be pursued to reduce dependency on short-term project-based funding.

To ensure effective implementation, next steps for policymakers, conservation managers, and funding agencies should focus on securing long-term financial investments in MPA management, integrating climate resilience strategies into conservation planning, and promoting international recognition of Belize's marine conservation.

Additionally, strengthening data-sharing platforms and investing in conservation technologies, such as remote sensing for ecosystem health monitoring, can enhance Belize's ability to track conservation progress and inform management decisions.

Ultimately, achieving Green List pathway is not merely an endpoint but a commitment to continuous learning, adaptive management, and collaborative governance. Belize has the opportunity to set a global benchmark for excellence in marine conservation, demonstrating that well-managed MPAs can balance biodiversity conservation with sustainable economic development.

Appendices

Appendix 1: Workshop participants and pictures

Provided in Appendix 1 is a list of organisations involved in the workshop and a series of photographs of the event (see Figures x, y, z).

Stakeholder organisations that attended:

- Turneffe Atoll Sustainability Association
- Wildlife Conservation Society
- Belize Fisheries Department
- Ministry of Blue Economy and Disaster Risk Management
- Sarteneja Alliance for Conservation and Development
- National Biodiversity Office
- Belize Audubon Society
- IUCN

Figure 17: Workshop attendees.

Appendix 2: Workshop Methodology & Agenda

Workshop Objectives

1. Review the progress achieved on the GL-IBEX assessment since 2024 for each participating site.

2. Validate self-assessment scores and ensure alignment with Green List Standards.

3. Identify key gaps and priority actions needed to strengthen compliance with Green List criteria.

4. Equip site managers with a clear methodology to collect missing information and refine their documentation.

5. Co-develop a short-term roadmap (2025) ensuring that all sites initiate their Green List application and achieve pathway.

Target Participants

- MPA site co-managers and technical staff (1-2 representatives per site)
- IUCN protected areas experts
- WCPA protected areas expert

Workshop Structure & Methodology

Session 1: Plenary - Introduction & Setting the Stage

Time: 09:00 – 11:00 am

Objective: Align participants on workshop goals, revisit GL-IBEX methodology, and refresh knowledge on the Green List process.

Facilitation: IUCN experts

Methods:

- Welcome remarks
    - Belize Fisheries Department
    - IUCN
- Participant introductions and ice-breaking activity
- Workshop objectives and expectations
- Presentation: Overview of the IUCN Green List Standard.
- Recap: GL-IBEX methodology and assessment framework.
- Open discussion: Q&A session to clarify key concepts and workshop process.

Deliverables:

- Shared understanding of GL-IBEX progress and Green List pathway.
- Clarified expectations for the workshop.

Session 2: Breakout Group Discussion – Reviewing GL-IBEX Progress & Gaps

Time: 11:00 am – 02:00 pm

Objective: Conduct a structured site-by-site review of GL-IBEX assessment progress, validating self-assessment results from the 2023–2024 GL-IBEX assessment and identifying key documentation gaps.

Facilitation: IUCN experts assigned per site/group

Methods:

- Site-specific breakout groups: Participants are divided into groups for each MPA, and the process is facilitated by an IUCN expert.
- Structured review: Each group goes through GL-IBEX results indicator by indicator, checking:
    - Previous answers (yes, partially, no).
        - Update answers if relevant.
    - Justification for each modified answer (in GL-IBEX cell "what's needed").
    - Indication of potential missing data or documentation gaps (in GL-IBEX cell "what's needed", if answer is "partially" or "no").
- Discussion & validation: Site managers provide feedback, and IUCN experts help refine scores.

Deliverables:

- A validated and updated GL-IBEX assessment for each site.

Session 3: Breakout Group Discussion – Developing the Green List Roadmap

Time: 02:00 – 04:30 pm

Objective: Define concrete, short-term steps each site needs to take to start the Green List application and achieve pathway in 2025.

Facilitation: IUCN experts

Methods:

1. **Action planning exercise:**
    - Participants are guided through the Green List roadmap template.

- Each site co-manager develops a SMART Roadmap (Specific, Measurable, Achievable, Realistic, Time-bound) with key actions, responsible persons, and deadlines.
    1. Select all criteria under 80% (0.8 in the GL-IBEX format).
    2. From these criteria, review all indicators that read “partially” or “no” and:
        1. Identify gaps
        2. Propose key actions
        3. Identify responsible(s)
        4. Set a reasonable timeframe for action completion
        5. Identify means of verification
- Prioritize quick-win actions are prioritized to accelerate progress.

2. **Peer review** (if time allows)**:**
    - Each site presents their roadmap to the group for feedback and refinement.
    - Cross-site collaboration is encouraged to share resources and expertise.

Deliverables:

- A Green List roadmap for each site, detailing specific actions, responsibilities, and deadlines.

Session 4: Plenary - Next Steps & Commitments

Time: 04:30 – 05:30 pm

Objective: Secure commitments from participants and establish a follow-up plan to ensure implementation of the roadmap for each site.

Facilitation: IUCN experts

Methods:

- Plenary discussion: Address key challenges at the site level and the system level.
- Plenary discussion: Identify funding opportunities needed to implement the roadmap.
- Plenary discussion: Enabling conditions and actions required to achieve the Green List pathway.
- Commitment statements: Site managers articulate their next steps and timelines.
- Follow-up plan: Agreement on monitoring mechanisms and check-in points.

Deliverables:

- Formalized next steps and participant commitments.
- Agreed timeline for Green List application submission and support.

Expected outputs

1. Validated GL-IBEX results for all participating sites.
2. Gap analysis report outlining areas requiring improvement.
3. Site-specific action plans with clear steps for Green List pathway.
4. Commitments from site managers to implement priority actions.
5. Follow-up mechanism established to track progress towards pathway.

Appendix 3: Participants' Feedback

At the start of the workshop, participants shared their expectations, emphasizing the need to deepen their understanding of the IUCN Green List process, including its steps, methodology, and overall framework. They also sought clarity on the requirements for maintaining the pathway, as well as support in progressing with the GL-IBEX assessment validation.

Additionally, participants were eager to explore the benefits and opportunities associated with Green List pathway for MPAs and to address any concerns or uncertainties related to the process (Figure 18).

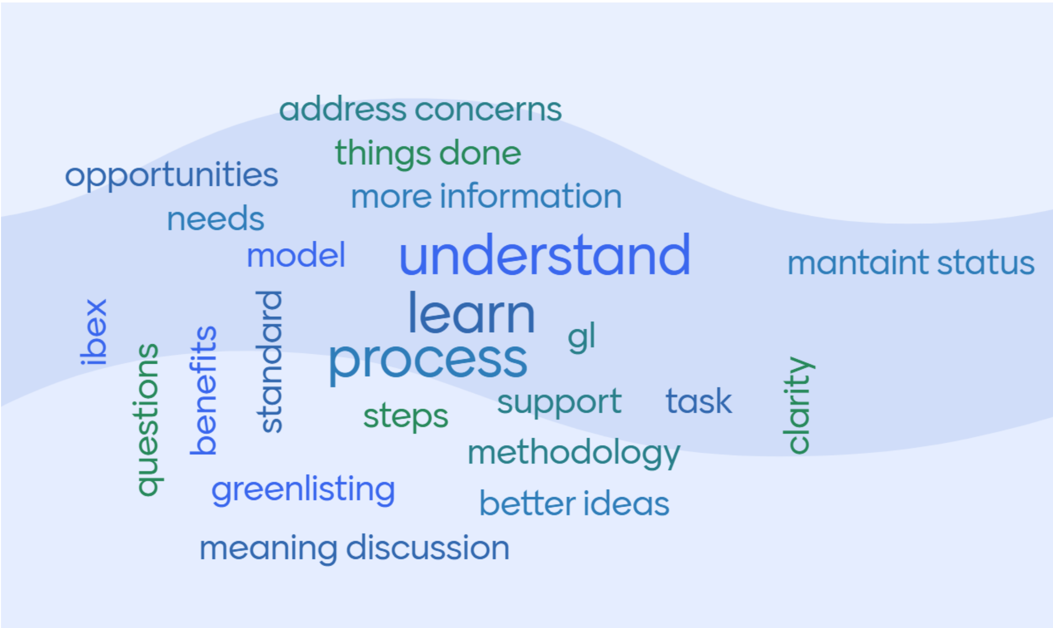

Figure 18: Summary of participants thoughts on the benefits and opportunities for Green Listing in Belize.

As part of the workshop's introduction and icebreaking activity, participants engaged in a reflective exercise titled **"Love and Passion"**, where they shared what inspires and motivates them in their work (Figure 19). This activity provided an opportunity to connect on a deeper level, highlighting the personal and professional values that drive their dedication to conservation.

Participants expressed a profound sense of purpose and passion, emphasizing the significance of their roles in protecting marine and coastal environments. Their responses revealed a collective commitment to:

- Nature, biodiversity, and conservation – A deep appreciation for the beauty and complexity of marine ecosystems, and the responsibility to safeguard them against growing threats.
- Environmental education, monitoring, and enforcement – The importance of spreading awareness, ensuring compliance with regulations, and using science-based approaches to strengthen conservation efforts.

- Engaging with communities, knowledge sharing, and collaboration – The recognition that lasting conservation success is built through meaningful partnerships, local involvement, and the exchange of ideas and expertise.

- Preserving marine and coastal ecosystems for future generations – A shared vision of sustainability, ensuring that the oceans and coastal areas remain healthy, productive, and resilient for those who will inherit them.

This discussion set an **inspiring tone** for the workshop, reinforcing the **shared values and collective ambition** among participants to contribute to a thriving and well-managed network of MPAs.

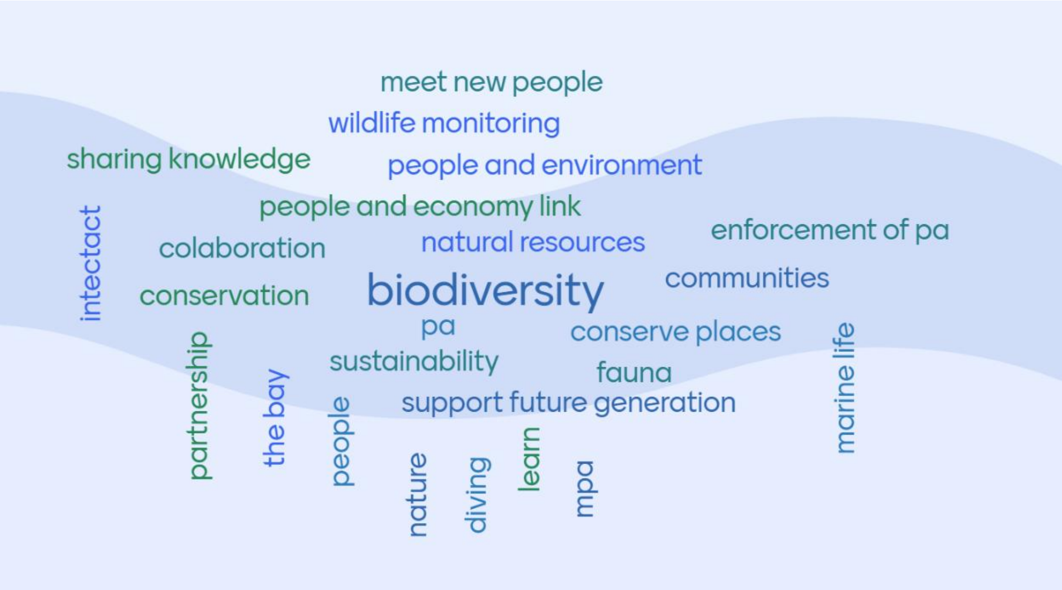

Figure 19: Summary of participants inputs to the icebreaker 'Love and Passion'.

The survey report presents participants' ratings on various aspects of the workshop, measured on a scale from "strongly disagree" to "strongly agree" (Figure 20).

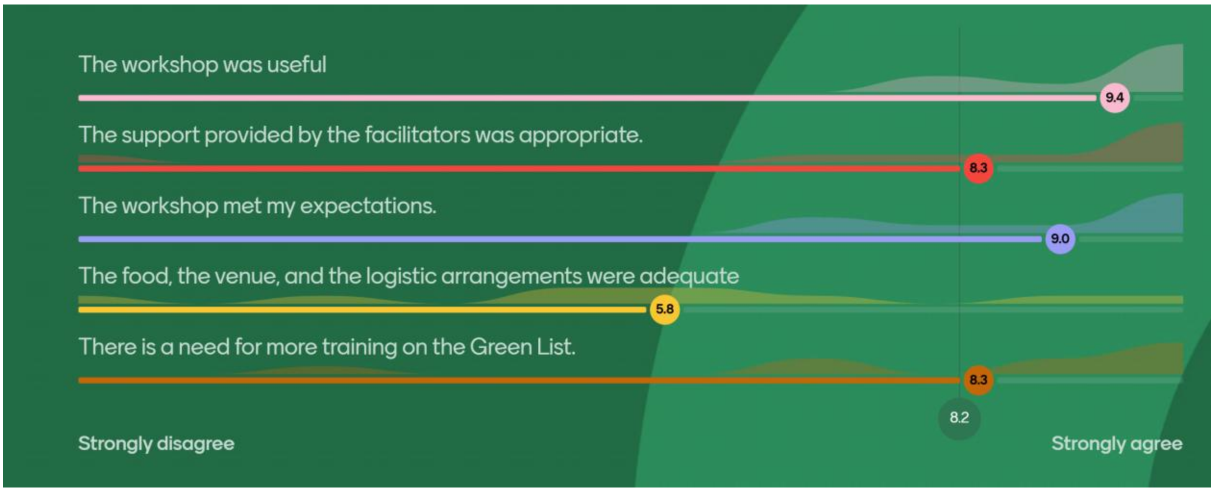

Figure 20: Summary of participants responses for aspects of the workshop.

1. Overall positive feedback on the workshop

    - The workshop received a high rating of 9.4, indicating that participants found it highly useful.

    - Similarly, expectations were largely met, with a 9.0 rating, reflecting general satisfaction.

2. Facilitator support was well-received but slightly lower

    - The support provided by facilitators scored 8.3, suggesting that while participants appreciated their role, there is still a minor gap that could be improved.

3. Logistics and venue received the lowest score

    - The 5.8 rating for food (quality and diversity of food and beverages during coffee breaks) and the venue at the Best Western Biltmore (meeting room could not accommodate 23 participants adequately) was the weakest aspect of the workshop. Participants that stayed a night at the Biltmore were highly satisfied. This indicates that logistical arrangements did not fully meet participant expectations, highlighting a need for improvement in future events.

4. Strong demand for additional training on the Green List

    - The rating of 8.3 suggests a clear recognition of the need for further capacity building on the Green List process. Participants see value in additional learning opportunities.

Key takeaways and recommendations

- **Maintain strengths**: The content and facilitation of the workshop were well-received; maintaining similar approaches in future sessions is advised.

- **Enhance logistics**: The venue, catering, and logistical planning need improvement to enhance overall satisfaction.

- **Expand training on the IUCN Green List:** Given the demand for additional training (8.3 rating), follow-up workshops, mentorship programs, or online training modules should be considered.

Ocean Country Partnership Programme

The Ocean Country Partnership Programme (OCPP) is a bilateral technical assistance and capacity building programme that provides tailored support to countries to manage the marine environment more sustainably, including by strengthening marine science expertise, developing science-based policy and management tools and creating educational resources for coastal communities. The OCPP delivers work under three thematic areas: biodiversity, marine pollution, and sustainable seafood. Funding is provided through the overarching Blue Planet Fund (BPF) by the UK Department for the Environment, Food and Rural Affairs (Defra).