

REGIONAL GUIDELINES FOR THE NORTHERN PLANNING REGION

AUGUST 2025



**Belize Fund For A
Sustainable Future**



IH cantabria
INSTITUTO DE HIDRÁULICA AMBIENTAL
UNIVERSIDAD DE CANTABRIA

MAIN CHARACTERISTICS OF THE COASTAL PLANNING REGION

Population

Approximately 20,000 (SIB, 2022)

Coastal communities and major population centers

Chunox Village, Consejo Village, Copper Bank Village, Corozal Town, Sarteneja Village (SIB, 2022)

Cayes

Blackadore Caye, Cayo Falso Cayes, Deer Caye, Mosquito Caye, Round Caye/ Little Iguana Caye, Savannah Caye, Shipstern Caye, Swab Caye

Area Approximately 1425 km²

Aquatic: 1030 km²

Continental: 387 km² **Cayes:** 7,60 km²

Ecosystems

Seagrass beds, Mangroves

Major Sources of Income

Fishing, Tourism and hospitality, Agriculture

Main topics

Tourism, Fishing, Marine Transportation, Marine Dredging and Mining, Land Use and Development, Coastal Agriculture, Coastal Aquaculture, Waste Management and Pollution, Disaster Risk Management.

OUTLINE OF THE DOCUMENT

1	INTRODUCTION TO THE REGIONAL GUIDELINES	1
2	THE NORTHERN PLANNING REGION	3
2.1	Ecosystem services and habitat risk assessment	3
2.2	Disaster risk and climate change adaptation	3
2.3	SWOT Analysis.....	5
3	ICZM RECOMMENDATIONS IN NORTHERN PLANNING REGION.....	8
3.1	Key issues and recommendations.....	8
3.2	Implementation, monitoring and evaluation plan.....	12
4	Appendix	14
4.1	Recommendations for community and caye development.....	14
4.2	NSTMP recommendations	15
5	BIBLIOGRAPHY.....	17

1 INTRODUCTION TO THE REGIONAL GUIDELINES

The management of the Northern region’s coastal zone should follow the recommendations and action lines proposed in the National Integrated Coastal Zone Management (ICZM) Plan and be linked to the goals and aspirations of the local community. New infrastructure, such as the completion of the Philip Goldson Highway and Remate Bypass Upgrade Project in June 2024, represent an opportunity for local communities, but the development it will bring, especially tourism, may affect the environment and livelihoods, so special emphasis will be placed on this region to ensure sustainable and risk-resilient coastal development.

Therefore, this Regional Guideline has been developed to:

- Present updated information on Habitat Risk Assessment (HRA), a useful tool for assessing potential impacts and informing environmental conservation decision-making.
- Present updated information on the disaster risk profile to contribute to a more resilient development of the coastal zone.
- Summarize the key issues and challenges of the region, by identifying the strengths, weaknesses, opportunities and threats (SWOT analysis) and collecting feedback from Coastal Advisory Committees (CAC).
- Formulate a set of recommendations to be developed in the region, in collaboration with local committees and stakeholders.
- Provide information on sectoral recommendations for development standards.

To this end, this document is structured in the following sections:

- Section 1. The Northern Planning Region: presents information on ecosystem services and HRA, disaster risk and SWOT analysis
- Section 2. ICZM recommendations: this section presents the key issues identified combining literature review and stakeholder consultations and informs the formulation of a set of recommendations and actions, supported by a four-year implementation, monitoring, and evaluation plan.
- Appendix: including (i) recommendations for community and caye development, as outlined in the *Interim National Integrated Coastal Zone Management Plan: 2020-2025*, align with the *National Guidelines for the Subdivision and Consolidation of Land* from the Lands Department; and (ii) recommendations from the *National Sustainable Tourism Master Plan*, updated in 2023.

The information presented in this document has been prepared using a combination of technical and participatory approaches. The technical process included the review of existing studies and previous ICZM Plans and the performance of the Habitat Risk Assessment model. The participatory approach was intended to organize two rounds of consultation in the Coastal Planning Region with local stakeholders. A first meeting was held on December 11, 2024, with a representative of the Sarteneja Alliance for Conservation (SACD), to identify key issues and challenges in the Northern Coastal Planning Region. A second meeting with a wider group was held on March 31, 2025, to validate proposed key issues and recommendations and prioritize actions.



Figure 1. Meeting with local stakeholders (House of Culture, Corozal, March 31, 2025).

2 THE NORTHERN PLANNING REGION

2.1 ECOSYSTEM SERVICES AND HABITAT RISK ASSESSMENT

In the Northern Region most of habitats are at medium risk according to Habitat Risk Assessment (InVEST model) (Figure 2, Table 1). There is a small area of coral reefs in this region, most of which is at medium risk due to maritime transportation. Regarding mangroves, most of those at low risk are located further inland. Those at high risk are primarily due to agricultural runoff, aquaculture, development, recreation, and transportation. Finally, almost the entire region is covered by seagrass beds at medium risk, except for some areas close to land that are at high risk due to agricultural runoff, aquaculture, fishing, recreation, and transportation.

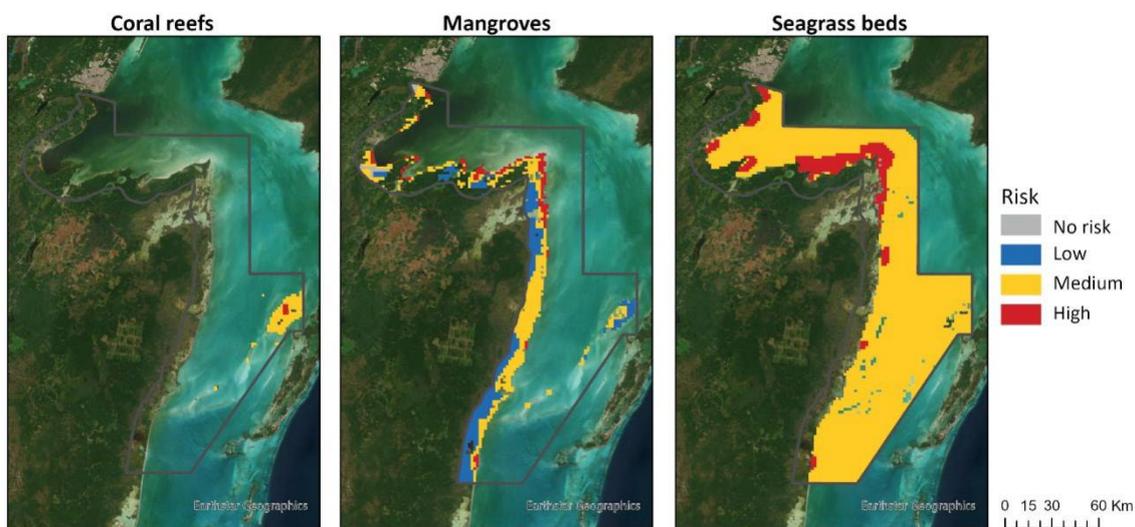


Figure 2. Coral Reef, mangroves and seagrass beds classified as high, medium and low risk for current human activity (2025) in Northern Region.

Table 1. Habitat Risk Assessment InVEST model outputs for Northern Region.

Habitat	No risk (km ²)	Low Risk (km ²)	Medium Risk (km ²)	High Risk (km ²)
Coral Reefs	0	0	34	2
Mangroves	6.25	113	147.75	31.25
Seagrass	0	0.25	957.5	95.5

2.2 DISASTER RISK AND CLIMATE CHANGE ADAPTATION

Northern Planning Region faces significant hazards and risks related to coastal dynamics and climate change. Corozal District’s most critical threats are tropical cyclone winds and floods, with 100% and 14.6% of the population and capital exposed to each hazard respectively (Pacific Disaster Center, 2021). Most of those impacted populations and infrastructures are likely to be in great proximity to coastal areas. Flood mapping related to tropical cyclones (see Figure 3) consistently highlights Northern and Central Belize as the most affected areas in the country. Within the Coastal Planning Regions (CPR), Corozal Town experiences the greatest impacts in

terms of population and infrastructure vulnerability. Under current conditions, flood heights exceeding 3 m occur only during events with 100-year return periods. However, under a pessimistic climate change scenario (IPCC AR5 RCP8.5 by 2050, resulting in a sea level rise of 0.275m), similar flood heights are reached with return periods as short as 50 years (Martínez et al., 2022). The extension of the flooding covers most parts of the eastern side of the CPR, considering it's a low-lying area. Rainfall-related flooding is also increasing due to community expansion, rising phreatic levels (saltwater infiltration), the filling of natural catchment areas and the alteration of channels and natural water systems because of massive agricultural development.

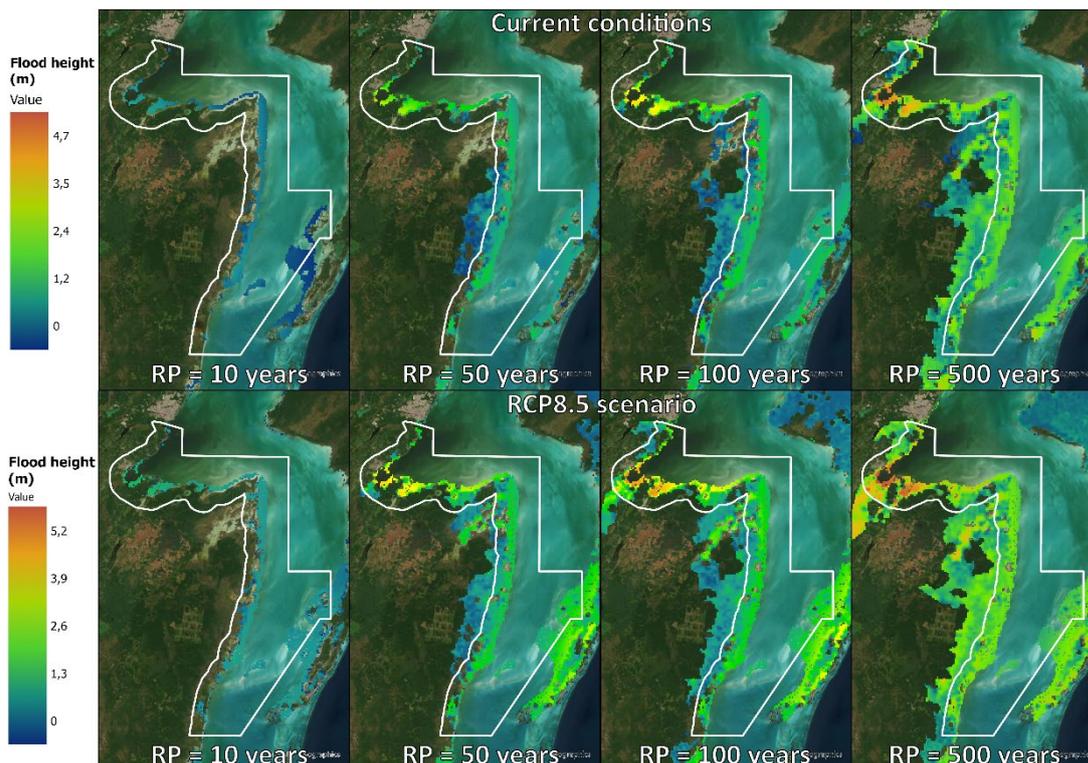


Figure 3. Maps with the 10, 50, 100 and 500 years return periods of extent and depth of flooding for current conditions and for the RCP8.5 climate change scenario by 2050 (SLR= 0.275 m) for Northern Planning Region. (Source: Martínez, J. et al., 2022)

Coastal erosion is another critical concern, but mangroves play a key role in mitigating its effects, by providing a natural shield for these areas. According to Martínez et al. (2022), Belize's mangroves significantly reduce erosion caused by tropical cyclones, maintaining shoreline retreat in Corozal Town below 0.12 m under both current and pessimistic scenarios. However, in sandy coastal areas like Consejo, shoreline erosion (without considering beach resilience, i.e., the ability of a beach to recover naturally from erosion caused by storms or climate change effects) is projected to reach up to around 0.6 m under both scenarios.

Given the CPR's high exposure to tropical cyclone-related hazards and the estimates on serious injuries/loss of life of the population as well as on damage to households and associated replacement costs, it is considered that the populated areas in Northern Region, mainly Corozal Town, suffer some of the highest individual human and infrastructure risks in the country.

The region's vulnerability is primarily driven by high environmental stress (e.g., high rates of tree cover loss) and limited access to clean water. Additionally, emergency services and economic

stability rank among the lowest sectors in terms of coping capacity. Nevertheless, Northern Coastal Planning Region's resilience is relatively high compared to other CPRs leading to low multi-hazard risks, mainly composed by tropical cyclone winds and storm surges (Pacific Disaster Center, 2021).

2.3 SWOT ANALYSIS

The following section presents a SWOT analysis of the CPR identifying elements or processes that need to be improved or strengthened (Weaknesses), mitigated (Threats), maintained (Strengths), and leveraged (Opportunities), which in turn help define coastal management objectives and recommendations. This analysis results from a careful assessment, including an in-person consultation process with local stakeholders (meeting held on March 31, 2025, in the House of Culture of Corozal), a review of existing studies of the coastal area available and the analysis of previous ICZM Plans, together with the review of sectoral policies and plans.

Strengths:

- Mangroves provide vital protection against hurricanes, storm surges, and erosion, enhancing the region's resilience.
- There is increasing recognition of the need for sustainable land use, habitat conservation, and responsible tourism and fisheries management, with stakeholders advocating for the international funding to support conservation and adaptation efforts.
- High ecological and environmental value due to habitats such as mangroves and seagrass beds and great diversity of marine life, with the protected area of Corozal Bay Wildlife Sanctuary (CBWS), home to West Indian manatees and a variety of threatened fish and invertebrate species.
- Active committees and environmental organizations in place, such as the Corozal Bay Advisory Committee and Sarteneja Alliance for Conservation and Development, among others.

Weaknesses:

- Inconsistent enforcement of existing regulations allows tourism projects and mangrove clearance permits to be approved without proper oversight, increasing the risk of environmental damage, particularly in ecologically sensitive coastal areas such as Mayan beach.
- Increasing rainfall-related flooding risk is driven by rapid urban expansion, rising phreatic levels (saltwater infiltration), and the filling of natural catchment areas. The alteration of channels and water systems due to large-scale agriculture worsens flood risks, while inadequate drainage and limited evacuation resources further weaken disaster response capabilities.
- Untreated sewage from Corozal Town, Sarteneja, and Orchid Bay is discharged into rivers, causing eutrophication (e.g., in the New River) and water quality degradation. The absence of formal waste management systems and the use of garbage to fill swamps worsen environmental and health risks, while weak enforcement and limited funding hinder solutions.
- Low levels of dissolved oxygen found in the New River by surrounding agriculture runoff and shrimp farm discharge.

- With 90% of the land being privately owned, conservation efforts are hindered (e.g., insufficient preservation of the 66 ft. Buffer reserve), making it difficult to implement large-scale ecological protection measures without significant funding.
- Traditional fishing methods in protected areas and overfishing of juvenile barracudas threaten sustainability. Weak penalties, jurisdictional disputes, and illegal incursions by foreign nationals' further strain marine resources and traditional fishing rights.
- Rapid shoreline erosion drives unregulated beach nourishment, seawall construction, and dredging without proper assessment. Limited access to fill materials leads to extraction from sensitive areas like Corozal Bay Wildlife Sanctuary, causing turbidity, sedimentation, and biodiversity loss.
- Lack of awareness among the population of their right to legal access to the 66 feet Reserve.

Opportunities:

- Strengthen the presence of Coastal Zone Management Authority and Institute (CZMAI) in the region.
- Improved coordination between institutions and stricter enforcement of environmental and development regulations, such as better mangrove protection and land use management, can ensure compliance with the ICZM Plan.
- Promoting low-impact, eco-friendly tourism, along with alternative fishing activities like blue crab fishing, and sport fishing, can provide economic benefits while reducing pressure on overfished species and sensitive ecosystems.
- Organizing capacity building programs with tourism developers and local fishermen to raise awareness and capacities to develop sustainable and resilient initiatives.
- Establishing vessel registries, increasing patrolling in Marine Protected Areas (MPAs), and enforcing sustainable dredging practices can help mitigate environmental degradation and protect marine life.
- Integrating disaster risk reduction strategies, such as enhancing drainage systems, protecting and restoring mangroves, and using nature-based solutions in coastal development planning, can improve resilience to flooding and storm surges.
- Initiatives aimed at diversifying fishing practices, reducing pressure on barracuda populations, promoting sustainable tourism, and regulating activities help to protect local ecosystems and support economic stability.

Threats:

- The new highway is expected to accelerate coastal development, leading to increased pressure on ecosystems (mainly mangroves) and higher risks of erosion and flooding, especially in ecologically sensitive areas.
- Marine transportation could become a rising issue, with no monitoring systems in place.
- Rising sea levels, stronger hurricanes, and unpredictable cold fronts are escalating risks to both infrastructure and natural systems, threatening long-term stability.
- Continued destruction of mangroves and coastal development could diminish natural buffers, increasing vulnerability to flooding, storm surges, and coastal erosion, as well as loss of nursery areas.
- Limited land availability for conservation due to high private ownership and financial constraints complicates efforts to protect ecosystems and implement large-scale conservation initiatives.

- Rising temperatures and humidity could negatively affect agriculture, marine biodiversity, and public health, requiring urgent measures to adapt to these environmental shifts.
- Loss of beach and water access for local communities, recreational purposes and traditional use.
- Increased coastal erosion and infrastructure vulnerability due to climate change impacts.

3 ICZM RECOMMENDATIONS IN NORTHERN PLANNING REGION

3.1 KEY ISSUES AND RECOMMENDATIONS

Table 2. Key issues and recommendations. ID refers to the Code of each Recommendation (R).
S refers to the scale implementation of each recommendation: National (N), Local (L).

TOPIC	KEY ISSUES	ID	RECOMMENDATIONS	S*
Tourism	The rapid increase in tourism has serious environmental, social and economic impacts (e.g., loss of ecosystem services provided by mangroves, shortage of public spaces and parks, and decline in tourist attractiveness).	R1	Develop a collaborative land use action plan in the Northern Region to ensure that tourism development does not impact key coastal ecosystems, provides social benefits and considers DRM.	N/L
		R2	Improve relationships between local experts and developers to implement capacity-building programs on environmentally responsible and disaster resilient planning.	N/L
		R3	Develop specific guidelines and requirements for disaster-resilient and eco-friendly construction methods for tourism facilities.	N
	Large developments are often carried out without sufficient public consultation or proper environmental assessments.	R4	Strengthen the participation of national and local entities into the permitting process to ensure sustainable development in the area.	N/L
	Limited access due to poor road infrastructure is hindering economic development and tourism potential in Sarteneja Village.	R5	Develop a tourism and land use plan that includes road infrastructure upgrades to attract investment and promote small business opportunities in Sarteneja.	N/L
Fishing	Illegal fishing in protected areas due to insufficient penalties and enforcement of regulations.	R6	Introduce stricter penalties for illegal fishing, particularly in protected areas. Invest in monitoring technologies like GPS, drones, and satellite imagery; and in staff training, number of officers and boats to improve enforcement.	N
	Decline of key fish species (such as barracuda) due to juvenile captures.	R7	Develop educational programs, awareness campaigns and incentives for fishers for adopting sustainable methods (e.g.: certification for sustainable fisheries). Develop a roadmap/strategy to address beach traps in the Corozal Bay Wildlife Sanctuary.	N/L
	Data gaps about fisheries captures and stocks.	R8	Comprehensive data collection on fish stock dynamics and the impacts of non-anthropogenic factors. This could be supported through research	N/L

			partnerships and the establishment of data-sharing networks.	
	Traditional fishers are losing fishing rights	R9	Protect traditional fishers' rights by fostering co-management initiatives with local communities, ensuring sustainable practices.	N/L
	competition over some shared target species between sport and commercial fishing activities.	R10	develop extraction limits (size and/or weight limits) through joint work between CZMAI and the Fisheries Department,	N
Marine Transportation	Ship-generated waste and pollution threat marine habitats, mainly heavy vessel traffic (e.g., San Pedro–Corozal–Chetumal) and unregulated anchoring.	R11	Conduct hydrographic surveys, establish safe anchorage zones, and improve port facilities to manage vessel traffic and protect marine ecosystems.	N
		R12	Work closely with relevant agencies for the placement and maintenance of buoys, lighthouses, and boundary markers for marine protected areas (MPAs) to guide vessel traffic and reduce pollution.	N/L
		R13	Improve waste management practices for cruise ships and fishing vessels.	N/L
	There are insufficient monitoring capabilities to track illegal activities.	R14	Strengthen monitoring systems through increased patrols and community-based reporting mechanisms to better track and regulate illegal activities.	N/L
		R15	Implement local training programs for maritime professionals (e.g., marine pilots, environmental managers) to enhance monitoring and enforcement capabilities.	L
	Restricted Community Access to Coastal Waterways and Docking Areas	R16	Conduct a national assessment of the condition, accessibility, and legal status of municipal and village piers in coastal communities.	N/L
		R17	Prioritize public investment in communities without adequate municipal or village piers to ensure equitable access to coastal resources and economic opportunities.	N/L
Marine Dredging & Mining	Increased turbidity and changes in sedimentation patterns due to extraction activities, especially in sensitive areas like Corozal Bay.	R18	Implement stricter regulations on material extraction, especially in sensitive areas like Corozal Bay Wildlife Sanctuary, including the designation of restricted areas and the implementation of erosion control plans.	N
		R19	Local authorities and regional stakeholders should work together to identify and map sustainable extraction zones and collaborate on resource-sharing for beach nourishment and reclamation efforts.	N/L

Land Use & Development	90% of land is privately owned, with no formal protection for coastal or sensitive ecological areas.	R20	Provide tax benefits or subsidies for landowners who voluntarily protect and sustainably manage ecologically important land.	N
	Permits for clearance are easily granted.	R21	Strengthen the role of CZMAI in permitting process.	N
	Restricted Public Access to Coastal Areas	R22	Ensure public access to beaches by protecting customary rights and preventing shoreline privatization.	N
	Limited public awareness of legal coastal access rights, especially among low-income communities.	R23	Include a stakeholder engagement and communication strategy in the guidelines to raise public awareness about shoreline access rights and coastal management.	N
Coastal Agriculture	Excess nutrients from farming activities are leaching into surrounding water bodies, degrading water quality.	R25	Promote agroforestry and organic farming to reduce runoff, while strengthening riparian buffer zone enforcement to filter excess nutrients.	L
	Use of river buffers for ranching and unsustainable agriculture contribute to environmental degradation and loss of biodiversity.	R26	Create zoning policies for environmental protection, sustainable farming, and initiate reforestation and soil regeneration programs to counteract unsustainable agriculture and ranching.	L
Coastal Aquaculture	Unregulated aquaculture expansion and inadequate waste management lead to excess nutrient runoff, harming marine ecosystems and biodiversity. A lack of clear policies increases the risk of unsustainable practices.	R27	Implement the Aquaculture Stewardship Council Guidelines and finalize the Belize National Aquaculture Policy to regulate sustainable practices and minimize environmental impact.	N
		R28	Explore aquaculture alternatives.	L
Environment	Absence of formal sewage.	R29	Increase investment in treatment plants and waste management facilities in coastal areas like Corozal Town, Sarteneja and Orchid Bay.	N
	Improper garbage use for land creation in swamps worsens environmental degradation and public health.	R30	Develop strategies to reduce the use of garbage for land creation by promoting public education.	N/L
		R31	Increase funding for waste management infrastructure and engage communities with financial incentives.	N/L
	Lack of effective mangrove protection, despite their recognized ecological and economic importance.	R32	Promote land stewardship programs and funding mechanisms to buy areas to protect coastal habitats, including mangrove forests.	N/L
		R33	Designate restricted areas due to environmental value and sensitivity.	N/L

	Lack of data of lagoon systems	R34	Design and implement a data research program for lagoons.	N/L
	Unregulated waste disposal in natural features such as sinkholes poses environmental and cultural risks in the community.	R35	Collaborate with the Department of the Environment, Solid Waste Management Authority, and NICH to address illegal dumping in the cenote and assess its potential for environmental protection and cultural designation.	L
DRM	Increased climate-related risks.	R36	Increase collaboration between national agencies and local partners to mainstream DRM and climate change adaptation into land use plans.	N/L
	Coastal Infrastructure vulnerability due to climate change	R37	Prioritize the development of climate-resilient coastal infrastructure in erosion-prone areas, using both engineered solutions and nature-based approaches.	N/L
	Unplanned coastal development, including pier construction and mangrove removal, is accelerating beach erosion and sedimentation, increasing vulnerability to climate change impacts.	R38	Conduct an assessment of the cumulative impacts of coastal structures (e.g., piers, seawalls) to guide future development and inform regulatory updates.	N
		R39	Establish a national beach erosion monitoring program to systematically track shoreline changes and inform climate adaptation and disaster risk planning.	N
S: Scale: National (N) and local (L)				

3.2 IMPLEMENTATION, MONITORING AND EVALUATION PLAN

The implementation plan aims to establish priority recommendations to address the key issues of the CPR, as well as to define the actions needed to implement them. To this end, three recommendations have been prioritized, considering their relevance to local stakeholders, their feasibility of implementation during the four years of the ICZM plan, their potential to be applicable to other CPRs and their urgency in terms that have not been addressed during previous ICZM cycles. The selection of recommendations focuses on those at the CPR level.

Following this approach, the prioritized recommendations for this CPR are:

- R9. Protect traditional fishers' rights by fostering co-management initiatives with local communities, ensuring sustainable practices. The government should collaborate with civil society organizations to address conflicts and enhance sport fishing competitiveness through joint solutions and resource use agreements.
- R32. Promote land stewardship programs to protect coastal habitats, including mangrove forests.
- R33. Designate restricted areas due to environmental value and sensitivity.

The table below outlines the most relevant actions to be carried out for each priority recommendation. This implementation plan covers a four-year implementation period, specifying the stakeholders involved, progress indicators to track each action, and the baseline for comparison. To ensure effective implementation, a biannual report at the CPR level is required.

Table 3. Implementation plan for the prioritized recommendations.

ID	ACTION	STAKEHOLDERS INVOLVED	IMPLEMENTATION PERIOD				PROGRESS INDICATOR
			Y1	Y2	Y3	Y4	
R9: Protect traditional fishers' rights by fostering co-management initiatives with local communities, ensuring sustainable practices. The government should collaborate with civil society organizations to address conflicts and enhance sport fishing competitiveness through joint solutions and resource use agreements.							
9.1	Expand Sarteneja's co-management model to Chunox and Copper Bank.	Fisheries Department, SACD, Chunox and Copper Bank fishing communities					Co-management agreements signed
9.2	Facilitate participatory zoning dialogues among traditional, commercial, and sport fishers.	Fisheries Department, Local Fishers, Tour Guide Association, SACD, CZMAI					Number of meetings held; stakeholder satisfaction
9.3	Develop and implement local-level resource use agreements.	Fisheries Department, Local Fishers, Tour Guide Association, SACD					Agreements signed and enforced
9.4	Conduct workshops on legal rights, sustainable practices and conflict resolution.	Fisheries Department, NGOs, SACD, CZMAI					Number of fishers trained
R32: Promote land stewardship programs to protect coastal habitats, including mangrove forests.							
32.1	Develop voluntary stewardship agreements with private landowners.	CZMAI, Lands Department, SACD, Community leaders					Number of agreements signed
32.2	Launch a "mangrove guardians" outreach campaign highlighting cultural and economic value.	CZMAI, DOE, SACD, Ministry of Education, Local Schools					Number of campaigns held; community perception surveys
32.3	Provide small grants or tax incentives for private landowners who protect mangroves.	Ministry of Finance, CZMAI, Lands Department					Policy drafted and pilot program launched
32.4	Monitor compliance using drone and satellite imagery.	CZMAI, DOE, Forest Department					Imagery analyzed and violations tracked
R33: Designate restricted areas due to environmental value and sensitivity.							
33.1	Finalize and legally declare proposed restricted areas.	DOE, CZMAI, Lands Department, Local Governments					Official gazettement of areas
33.2	Strengthen enforcement presence through co-management and local patrols.	CZMAI, SACD, Forest Department, Fisheries Department					Number of operational patrols; violations decreased
33.3	Implement signage and boundary demarcation in restricted areas.	CZMAI, SACD, Village Councils					Signage installed

4 APPENDIX

The sectoral recommendations for development standards in terrestrial zones and cayes, as outlined in the *Interim National Integrated Coastal Zone Management Plan: 2020-2025*, align with the *National Guidelines for the Subdivision and Consolidation of Land* from the Lands Department. The following sections present these recommendations in detail.

4.1 RECOMMENDATIONS FOR COMMUNITY AND CAYE DEVELOPMENT

Table 4. Recommended tourism development for major population centers in the Northern Planning Region

COMMUNITY	RECOMMENDED TOURISM DEVELOPMENT
Consejo Shore	Retirement tourism
Corozal Town	Low density tourism
Chunox and Copperbank	Low density tourism
Sarteneja	Low density tourism
Shipstern Reserve Area	Very low density tourism

Table 5. Recommended land use for cayes in the Northern Planning Region

COMMUNITY	RECOMMENDED DEVELOPMENT DENSITY	RECOMMENDED DEVELOPMENT STANDARDS
Shipstern Caye	Not suitable for development	Conservation I
Deer Caye	Low impact development	Conservation II
Swab Caye	Limited capacity for development	Conservation II
Round Caye	Limited capacity for development	Conservation II
Blackadore Caye	Suitable for development	Conservation II
Mosquito Caye	Not suitable for development	Conservation I

Table 6. Subdivision criteria and residential development standards for the Northern Planning Region

Subdivision Criteria	Residential Development Standard
Primary Permitted Use	Single and Multi-Family Residential
Secondary Use	Commercial Low Density (convenience stores, small service shops, guest houses); Parks/Playgrounds, Community Facilities
Maximum Lot Size	0.167 acre (6 lots/acre)
Width/Length Ratio	1:02
Net Density (dwelling units per acre)	20 du/acre
Maximum # of Habitable Rooms per acre	120 guest beds/acre
Maximum Site Coverage	50%
Minimum Frontage	50 feet
Minimum Setbacks	
- Front	6 ft
- Side	6 ft
- Back	12 ft
Car Parking	1 per dwelling unit
Maximum Building Height	As per requirements/standards of the Central Building Authority

Maximum # of floors per building	As per requirements/standards of the Central Building Authority
Services	Water, Electricity, Telecommunications, Sewerage Treatment, Waste Disposal

4.2 NSTMP RECOMMENDATIONS

The *National Sustainable Tourism Master Plan*, updated in 2023, provides an overarching tourism policy and strategic planning instrument. It spans a 20-year period (2010-2030) and highlights 8 contemporary themes regarding tourism. The following themes and actions are established for the Northern Planning Region:

Urban Settlement & Management

- 1.7** Ensure the (real and perceived) safety and security of all visitors (at day and night) in tourism towns is prioritised.
- 1.8** Showcase distinctive urban-historic-cultural-natural assets and experiences in tourism township areas.
- 1.9** Protect the important peri-urban fringe from development encroachment where agricultural and/or environmental conditions occur.
- 1.10** Improve the image, presentation and functional attributes (ie. public realm quality, development standards, public transit) of urban areas.

Coastal Conditions & Resilience

- 2.1** Designate, protect and strengthen existing coastal/lagoon mangrove forests (and rehabilitate where required).
- 2.2** Identify and showcase locations for mangrove forest restoration for ecological and coastal fringe resilience.
- 2.3** Better understand the influence of climate change and sea level variation in coastal and lagoon settings (forecast mapping).
- 2.4** Support revegetation and enhancement of the coastal and lagoon edges through contiguous linear land planning.
- 2.5** Ensure development is well setback from the coastline/lagoon edge to avoid visual intrusion and potential harm from encroachment.
- 2.8** Manage and monitor water quality (and waste management) in the coastal threshold and associated lagoons.

Marine, Reef and Caye Condition

- 3.3** Policing of illegal fishing and related behaviours that compromise reef & biosphere conditions.

Cultural Attractions and Archaeological Sites

- 5.2** Develop a 'systems' approach with designated regional tourism linkages between a hierarchy of Maya (historic and living cultural) sites.
- 5.3** Strengthen 'national' standards for archaeological rehabilitation/restoration and associated tourism interpretation/information.
- 5.4** Improve the visitor experience at archaeological sites with respectful and equitable controlled access, improved safety, and conveniences for all visitors.

5.6 Grow visitor awareness/education of other living cultures across regions with opportunities to share traditional practices.

5.7 Carefully plan pathways to (and between) archaeological assets, site parking, and infrastructures judiciously.

5.8 Update site planning and tourism development controls for Maya archaeological sites identifying viewsheds, buffers, and wayfinding.

Trunk Infrastructure and Connectivity -Accessibility

6.1 Designate key highways connecting tourism destinations (and other roads) as ‘scenic routes’ for protections, treatment, and activation.

6.6 Develop funding models (such as tourism development contributions) to improve investment and maintenance of infrastructure.

6.9 Expand the capability and service of National Information & Technology (Internet) to support wider tourism market and aid communications, emergency management, and climate threats.

Regional Linkages and Frontier Interfaces

7.2 Work with neighbouring countries to develop international tourism links and fluid cross-border road, sea, and air connections.

Tourism Governance Management and Marketing

8.1 Adopt the Spatial Tourism Framework as a national network of hubs, nodes, and corridors to aid decision-making on planning and investment.

8.2 Identify opportunities for Special Economic or Tourism Zones to be applied to key locations for tourism investment and management.

8.6 Promote the use of clean energy and sustainable land and management for tourism development and services.

8.8 Build capacity within the education sector to deliver decentralized tourism training that can engender improved local jobs and services such as tourism training academy.

8.14 Restore tourism standards program to benchmark with other regions (i.e. ASEAN) and promote information technologies.

5 BIBLIOGRAPHY

- Belize Tourism Board. (2024). *National Sustainable Tourism Master Plan for Belize 2022-2030*. Belize Tourism Board.
- Coastal Zone Management Authority and Institute (2016). *Belize Integrated Coastal Zone Management Plan*.
- Coastal Zone Management Authority and Institute (2023). *Interim National Integrated Coastal Zone Management Plan: 2020-2025*
- Intergovernmental Panel on Climate Change (IPCC) (2014). *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.
- Lands and Surveys Department, Ministry of Natural Resources and the Environment (2010). *National Guidelines for Subdivision and Consolidation of Land in Belize*.
- Martínez, J., Medina, R., Aguirre-Ayerbe, I., Pellón, E., Ramírez, M., Menéndez, P., Casal, C., Cánovas, V., Delgado, D., Jiménez, J., & Suarez, G. (2022). *Coastal Disaster Risk Profile and Adaptation Recommendations Considering Climate Change Scenarios for Belize*. <https://doi.org/10.18235/0004181>.
- Pacific Disaster Center (2021). *National Disaster Preparedness Baseline Assessment: Belize. District Risk Profiles*
- Statistical Institute of Belize (2022). *Population and Housing Census 2022*. <https://sib.org.bz/census/2022-census/>