Belize Sustainable Ocean Plan

Future Planning Workshop

Grand Resort & Residences
Belize City, Belize
February 25th - 27th , 2026

WORKSHOP PROCEEDINGS REPORT

April 1, 2026

BELIZE COASTAL ZONE MANAGEMENT AUTHORITY & INSTITUTE

Acronyms

The following table presents the acronyms and their corresponding full meanings as referenced throughout this Proceedings Report, to facilitate clarity and ease of interpretation.

Acronym	*Full Meaning*
BSOP	Belize Sustainable Ocean Plan
CZMAI	Coastal Zone Management Authority and Institute
ICZM	Integrated Coastal Zone Management
MPA	Marine Protected Area
MSP	Marine Spatial Planning
SMART	Specific, Measurable, Achievable, Relevant, and Time-bound

Table 1

Glossary

Terms and Definitions

Aquaculture
The farming of aquatic organisms such as fish, shellfish, and seaweed in controlled marine or freshwater environments for commercial, subsistence, or restoration purposes.

Ballast Water
Water carried in ships' ballast tanks to maintain stability, which may be discharged at sea and can introduce non-native species or pollutants into marine ecosystems.

Belize Sustainable Ocean Plan (BSOP)
A national marine spatial planning framework designed to guide sustainable use, conservation, and governance of Belize's marine and coastal resources while supporting economic development and biodiversity protection.

Blue Economy
An economic model that promotes sustainable use of ocean resources for economic growth, improved livelihoods, and ecosystem health.

Compatibility Matrix
A planning tool used in Marine Spatial Planning to evaluate how different marine uses and ecosystem features interact spatially and operationally, identifying whether activities are compatible, moderately compatible, or incompatible.

Conservation Targets
Quantitative objectives established to protect biodiversity, habitats, and ecosystem functions within a defined marine planning framework.

Ecosystem Features
Natural components of the marine environment such as coral reefs, mangroves, seagrass beds, spawning aggregation sites, and other habitats that support biodiversity and ecological processes.

Emerging Ocean Uses
New or evolving marine activities that may develop in the future due to technological innovation, economic investment, environmental change, or policy developments.

Governance Framework
The system of policies, institutions, regulations, and decision-making processes that guide the management and use of marine resources.

Marine Protected Area (MPA)
A geographically defined marine space managed through legal or other effective measures to conserve biodiversity, ecosystems, and associated cultural or ecological values.

Marine Spatial Planning (MSP)
A strategic planning process used to organize human activities in marine areas in order to balance ecological, economic, and social objectives while reducing conflicts between ocean uses.

Mariculture
A form of aquaculture specifically focused on cultivating marine organisms in ocean environments.

Maritime Administration
The sector responsible for regulating maritime transport, navigation safety, shipping operations, and marine regulatory compliance.

Mentimeter (Menti)
An interactive digital engagement platform used during workshops to collect participant feedback, conduct polls, and support collaborative decision-making.

Prioritization Criteria
Decision-making factors used to determine the relative importance of different marine activities or spatial uses when competing demands occur within the same area.

Scenario Development
A planning method used to explore possible future conditions by examining different combinations of environmental, governance, and economic drivers that may influence marine space use.

SeaSketch
A digital mapping and spatial planning tool used to support stakeholder engagement, data visualization, and marine spatial analysis during planning processes.

Spatial Zoning
The designation of specific marine areas for particular uses, activities, or conservation objectives within a marine spatial planning framework.

Stakeholder Engagement
A participatory process through which individuals, communities, sectors, and institutions contribute knowledge, perspectives, and feedback to inform planning and decision-making.

Technical Working Groups (TWGs)
Groups of subject-matter experts that provide technical guidance, review data, and support analytical components of the marine spatial planning process.

Zoning Framework
A structured system of spatial zones and management rules used to regulate human activities within marine areas in accordance with conservation and development objectives.

Executive Summary

The Marine Spatial Planning (MSP) Future Planning Workshop was convened by the Coastal Zone Management Authority and Institute (CZMAI) from February 25–27, 2026, in Belize City as part of the continued development of the Belize Sustainable Ocean Plan (BSOP). The workshop brought together members of the BSOP Steering Committee, Technical Working Groups, government agencies, and sector representatives to review progress in the MSP process and advance the future planning phase of the national marine spatial plan.

Over the three-day engagement, participants participated in presentations, sector-based discussions, and analytical exercises aimed at validating spatial datasets, reviewing compatibility between ocean uses, identifying emerging marine activities, and assessing potential future scenarios that may influence marine spatial allocation decisions. Activities included compatibility matrix validation, prioritization of sector uses, spatial data verification, and evaluation of emerging ocean uses.

The workshop produced several important outputs, including validated sector data layers, refined compatibility assessments, prioritized sector activities, and identified emerging marine uses across sectors such as fisheries, tourism, maritime administration, marine and coastal development, and ecosystem conservation. These results strengthen the technical foundation for the next phase of Marine Spatial Planning and provide key inputs for scenario testing and zoning analysis.

The outcomes of this engagement will support the continued refinement of the BSOP and contribute to Belize's commitment to strengthening ocean governance while advancing the

national target of protecting up to 30 percent of Belize's Ocean as outlined in the Blue Bonds Conservation Funding Agreement (CFA).

Introduction

The Belize Sustainable Ocean Plan (BSOP) represents a national effort to guide the sustainable management, conservation, and use of Belize's marine and coastal resources. The BSOP process is being led by the Coastal Zone Management Authority and Institute (CZMAI) under the Ministry of Blue Economy and Marine Conservation (MBEMC), the BSOP provides a framework for balancing ecological protection with economic development through an integrated Marine Spatial Planning (MSP) process.

The development of the BSOP forms a central component of Belize's commitments under the Blue Bonds Agreement, through which the Government of Belize pledged to strengthen ocean governance and expand biodiversity protection up to 30 percent of its oceanspace. Achieving this goal requires careful coordination across sectors that regulate and operate within the marine environment, including fisheries, tourism, maritime transport, coastal development, and ecosystem conservation.

MSP provides a strategic approach through which these diverse ocean uses can be organized and managed in a coordinated manner. By integrating spatial data, scientific analysis, stakeholder knowledge, and participatory decision-making, the MSP process seeks to reduce conflicts among marine activities, protect critical ecosystems, and support sustainable economic opportunities within Belize's ocean space.

As the BSOP process advances toward its future planning phase, stakeholder engagement remains a critical component of ensuring that spatial planning decisions reflect both technical evidence and sector realities. In this context, the Future Planning Workshop served as a key engagement within the broader MSP process, bringing together representatives from government agencies, technical working groups, economic sectors, and conservation organizations to collaboratively review progress and contribute to forward-looking planning discussions.

The workshop provided a structured platform for validating spatial datasets, refining compatibility assessments between existing marine uses, identifying emerging ocean activities, and examining potential future planning scenarios. Through facilitated dialogue

and sector-based analytical exercises, participants were able to assess how Belize's marine space is currently used and explore how future governance conditions, environmental pressures, and economic developments may influence MSP decisions.

This Proceedings Report documents the discussions, analytical exercises, and stakeholder inputs generated during the workshop. The report captures key observations, sector perspectives, and recommendations that will inform the continued refinement of the BSOP and support Belize's long-term commitment to sustainable ocean governance.

Workshop Overview

The Marine Spatial Planning (MSP) Future Planning Workshop was designed as a three-day, multi-stakeholder engagement to advance the future planning phase of the Belize Sustainable Ocean Plan (BSOP). Convened by the Coastal Zone Management Authority and Institute (CZMAI), the workshop brought together members of the Steering Committee, Technical Working Groups (TWGs), sector representatives, and the BSOP Core Planning Team to collaboratively review progress, validate technical inputs, and contribute to forward-looking spatial planning discussions.

The workshop was structured to build progressively over three days. Day One focused on reviewing existing conditions, including validation of spatial datasets, compatibility matrices, and sector priorities. Participants examined areas of compatibility and conflict among ocean uses and zoning categories, prioritized key sector considerations, and conducted final data validation exercises to ensure accuracy and completeness of planning inputs.

Day Two transitioned into forward-looking analysis, centering on the identification and assessment of emerging ocean uses and the validation of draft future planning scenarios. Sector-based group work and plenary discussions explored the likelihood and compatibility of emerging activities with existing uses, while participants reviewed and refined future scenario assumptions related to governance conditions and climate change impacts. The day also included refinement of the MSP goals and objectives to ensure they remain responsive to projected future conditions and aligned with national biodiversity and sustainable development commitments.

Day Three emphasized applied future planning and scenario testing. Participants assessed how zoning configurations may need to adapt under varying future conditions, identifying

potential spatial adjustments, trade-offs, pressure points, and opportunities for strengthened biodiversity protection and sustainable ocean use. Through structured reporting sessions and facilitated dialogue, areas of agreement, divergence, and priority focus were documented to inform subsequent technical refinement of the BSOP process.

The facilitation methodology incorporated plenary presentations, sector-based group exercises, compatibility matrix analyses, digital prioritization tools, scenario mapping exercises, and structured report-back sessions, infused with engagement icebreakers and energizers. This participatory approach was designed to promote transparency, equitable engagement, consensus-building, and technical rigor. Throughout the workshop, detailed notes were captured to ensure that stakeholder inputs, rationales, and recommendations were systematically documented for incorporation into the continued development of the BSOP.

Purpose and Objectives

The MSP Future Planning Workshop was convened to support advancement of the BSOP as it transitions into its future planning phase. In alignment with this, the primary objective of the engagement was to provide a structured platform for sharing updates on the progress of the BSOP development process and to accelerate collaborative future planning efforts toward finalization of the Marine Spatial Plan.

Specifically, the workshop sought to:

(i) present current progress within the MSP process, including validation of existing conditions, available spatial datasets, and completed spatial analyses;

(ii) provide updates on biodiversity protection targets and the pathway toward achieving Milestone 6;

(iii) validate vetted datasets, compatibility assessments, and sector inputs to ensure technical robustness;

(iv) set the stage for future planning by identifying and assessing emerging ocean uses and their implications for spatial planning;

(v) collaboratively develop and validate future planning scenarios scenarios and how zoning configurations may adapt under varying governance and climate change conditions;

(vi) Accelerate the BSOP future planning phase, through collaborative application of the future scenarios developed to guide potential sustainable use of Belize's marine space.

Collectively, these objectives were designed to strengthen stakeholder alignment, enhance technical credibility, and ensure that future zoning and planning decisions are grounded in both data-driven analysis and participatory consensus-building.

Expected Outputs

The workshop was designed to generate tangible, documented outputs that would directly inform the continued refinement of the BSOP. Key expected outputs included validated sector-specific datasets and spatial layers; refined compatibility matrices reflecting stakeholder input; prioritized sector uses and planning considerations; documented emerging ocean uses and likelihood assessments; validated future planning scenarios; and refined Marine Spatial Planning goals, objectives, and proposed indicators of success.

In addition, the workshop produced comprehensive session notes capturing key discussions, rationales, areas of agreement and divergence, and recommended refinements. These documented inputs form an essential evidence base to guide technical review, scenario refinement, and zoning adjustments within the next phase of the BSOP process.

Expected Outcomes

Beyond the technical deliverables, the workshop was structured to achieve broader process-oriented outcomes. These included strengthened multi-stakeholder alignment across sectors; improved shared understanding of progress achieved under the BSOP; enhanced trust and transparency in how competing interests and spatial trade-offs are addressed; and increased collective ownership of future planning decisions.

The workshop further aimed to accelerate the future planning phase by fostering informed dialogue on governance conditions, climate change impacts, biodiversity targets, and sector priorities. Through structured facilitation and inclusive participation, the engagement contributed to building consensus around key planning directions while identifying areas requiring further technical refinement or policy consideration.

Together, these outcomes reinforce the collaborative foundation necessary to finalize the Belize Sustainable Ocean Plan and advance Belize's long-term commitments to sustainable ocean management and biodiversity protection.

Methodology and Facilitation Approach

The facilitation methodology for the Marine Spatial Planning (MSP) Future Planning Workshop was designed to support inclusive participation, structured dialogue, technical validation, and consensus-building across diverse stakeholder groups. In alignment with the Terms of Reference, Muslar Saunders Consultancy & Services worked closely with the Coastal Zone Management Authority and Institute (CZMAI) MSP Unit during the pre-planning phase to refine the process agenda, confirm session objectives, align methodologies with desired outputs, and ensure that each activity directly supported advancement of the Belize Sustainable Ocean Plan (BSOP).

The overall facilitation approach combined plenary presentations, sector-based group work, structured analytical exercises, and guided report-back discussions. This blended methodology ensured that participants first received a shared technical foundation before engaging in collaborative analysis and decision-oriented dialogue. Each session was intentionally sequenced to build progressively from validation of existing conditions and compatibility assessments, to identification of emerging uses, to development and testing of future planning scenarios, and ultimately to consideration of zoning implications under varying governance and climate change assumptions.

Sector-based table groupings were utilized to ensure that technical expertise and sector-specific perspectives were fully represented in discussions. Dedicated facilitators supported each table to encourage balanced participation, manage time effectively, clarify instructions, and capture rationale behind sector decisions. Structured tools such as compatibility matrices, prioritization exercises, validation worksheets, and scenario mapping exercises were employed to guide analytical thinking and ensure consistency in outputs across groups.

Digital engagement tools, including the Mentimeter (Menti) platform, were integrated to support real-time prioritization and capture quantitative inputs from participants. This approach enhanced transparency in how sector priorities and considerations were ranked

while enabling immediate consolidation of results for plenary reflection. Visual aids, printed spatial maps, and annotated zoning overlays were also used during scenario sessions to promote spatial literacy and facilitate practical, place-based discussions.

Throughout the workshop, facilitation emphasized neutrality, equitable engagement, and constructive dialogue. Particular attention was given to managing cross-sector dynamics, surfacing areas of both alignment and divergence, and encouraging participants to focus on spatial planning implications rather than sectoral advocacy alone. End-of-day reflections were conducted to capture key insights, address emerging concerns, and adapt subsequent sessions as necessary to maintain coherence and momentum.

Comprehensive note-taking was undertaken across all sessions to document key discussion points, rationales, areas of agreement, identified conflicts, and recommended refinements. This systematic documentation ensures that stakeholder inputs are accurately reflected and integrated into subsequent technical review and decision-making processes are reflected within the development of the BSOP. The methodology applied throughout the three-day workshop was grounded in principles of transparency, inclusivity, technical rigor, and adaptive facilitation. By combining structured analytical tools with participatory dialogue, the workshop created a balanced environment in which stakeholders were able to collaboratively examine trade-offs, validate planning assumptions, and contribute meaningfully to shaping Belize's long-term marine spatial future.

Workshop Participation & Representation

The Marine Spatial Planning (MSP) Future Planning Workshop convened a broad cross-section of stakeholders representing the governance, technical, and sectoral landscape of Belize's marine space. Participants included members of the BSOP Steering Committee, Technical Working Groups (TWGs), representatives from key ocean-based economic sectors, governmental agencies, non-governmental organizations, and members of the BSOP Core Planning Team. This multi-sector representation reflects the inclusive and participatory framework established under the BSOP process and ensures that spatial planning decisions are informed by diverse perspectives, technical expertise, and lived experience.

Approximately sixty (60) participants were engaged across the three-day workshop. To promote structured dialogue and balanced participation, attendees were seated according to sector-based table assignments. Each sector table was supported by a designated facilitator to guide discussions, clarify activity instructions, and ensure equitable contribution from participants. The Finance and Investment sector was paired with the Energy sector to maintain balanced representation and optimize table dynamics.

The workshop maintained consistent participation across all three days, with attendance recorded daily to ensure transparency and documentation integrity. The structured table arrangement enabled focused sector-level analysis while also facilitating cross-sector learning during plenary report-back sessions. This format strengthened both technical depth within sectors and collective understanding across sectors.

Participation throughout the workshop was active and constructive. Stakeholders engaged meaningfully in compatibility assessments, prioritization exercises, emerging use identification, scenario validation, and zoning discussions. The inclusive facilitation approach encouraged open dialogue while maintaining alignment with workshop objectives and time parameters. As a result, the workshop achieved a balanced environment where technical expertise, policy considerations, economic interests, and conservation priorities were collectively examined within a shared spatial planning framework.

The breadth and diversity of representation contributed significantly to the credibility of the workshop outputs and reinforced stakeholder ownership of the future planning phase of the BSOP.

Participation and Representation

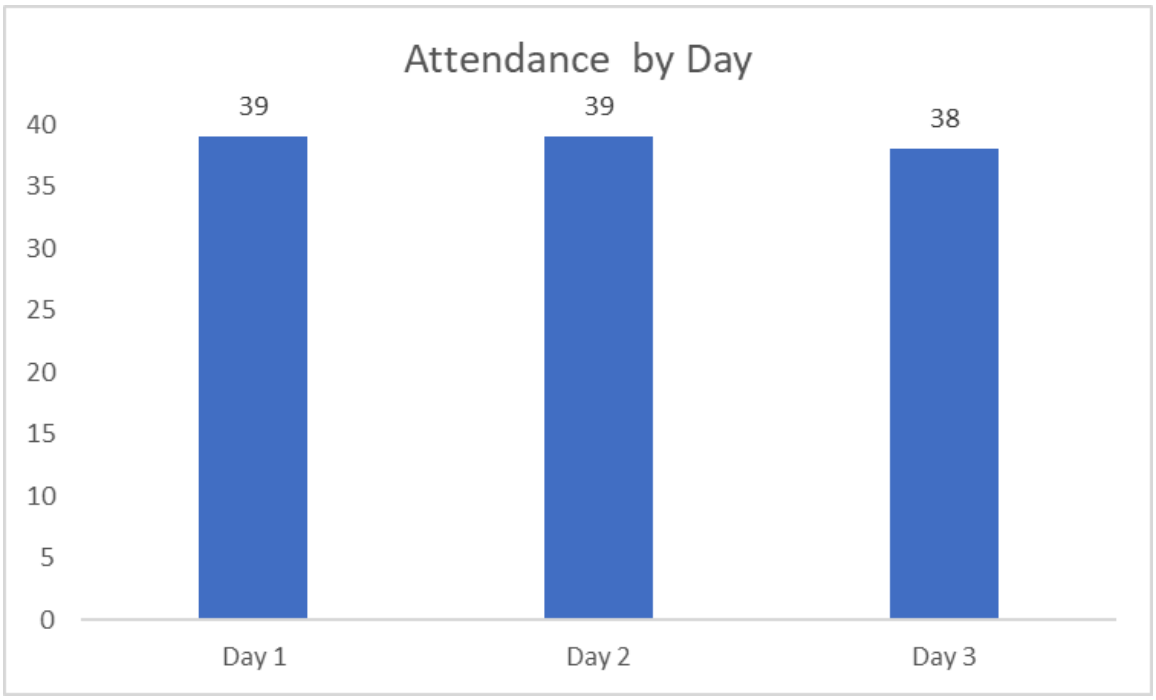


Figure 1 Participants' Attendance by Day

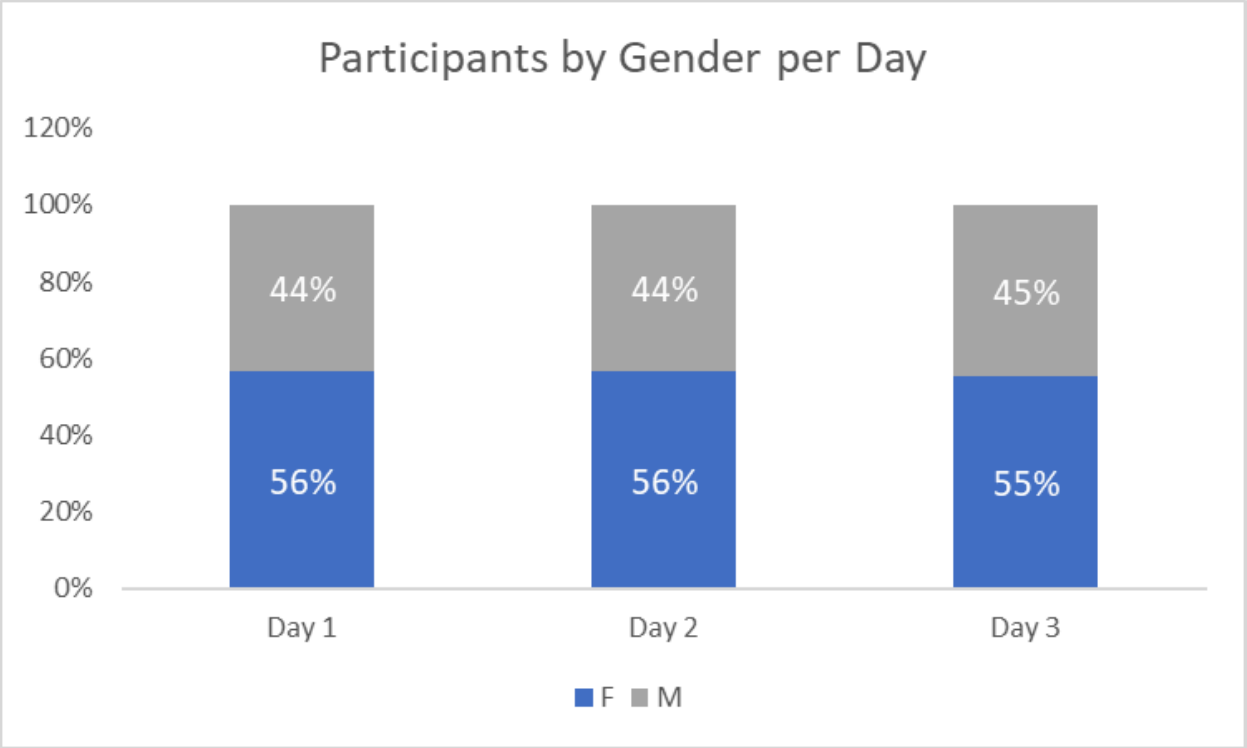


Figure 2 Participants' Attendance by Gender

A total of forty-six (46) participants attended the Future Planning Workshop over the three-day period. As illustrated in Figure 2, participation reflected a relatively balanced gender distribution. Female participants represented approximately 56% of total attendance, while male participants accounted for 44%.

Daily participation followed a similar pattern, with 22 female and 17 male participants on both Day 1 and Day 2, and 21 female and 17 male participants on Day 3. This consistent representation across the workshop days reflects strong engagement and inclusivity across genders within the marine spatial planning and coastal resource management sectors.

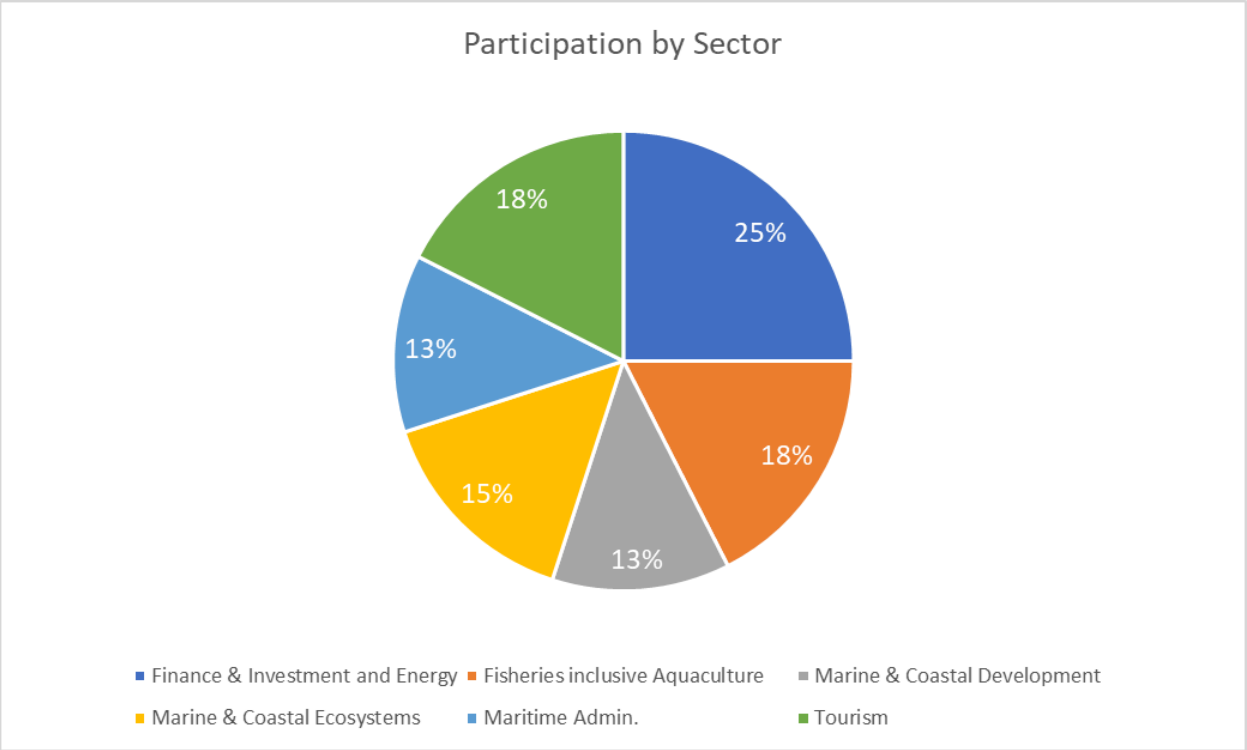


Figure 3 Participants Distribution by Sector

Participants in the Future Planning Workshop represented a diverse range of sectors involved in marine spatial planning and coastal resource management. As illustrated in Figure 3, the largest share of participants (25%) represented the Finance, Investment and Energy sector, reflecting the importance of economic and investment considerations in future marine planning discussions.

Participation from the Fisheries sector, inclusive of aquaculture and mariculture, and the Tourism sector each accounted for 18% of total participants, highlighting the strong representation of key marine-dependent industries. The Marine and Coastal Ecosystems sector represented 15% of participants, contributing important perspectives on habitat conservation and ecosystem management.

Representation from the Marine and Coastal Development sector and Maritime Administration each accounted for 13% of participants, ensuring that infrastructure, maritime operations, and regulatory considerations were incorporated into workshop discussions.

Overall, the sectoral distribution reflects a balanced cross-section of stakeholders involved in marine spatial planning, supporting inclusive dialogue on future ocean use and management.

Expected Outcomes

By the close of the workshop, participants had:

1. **Validated Compatibility Matrix**
   Participants reviewed and validated the compatibility matrix, providing sector-specific adjustments, revised compatibility scores, and recommendations to refine activity definitions and classifications.
2. **Identification and Prioritization of Emerging Ocean Uses**
   Participants identified and discussed emerging ocean uses, including mariculture, seaweed farming, offshore energy, and evolving tourism and maritime activities, which will inform future spatial planning considerations.
3. **Refinement of Spatial Data and Identification of Data Gaps**
   Through the spatial data validation exercise, participants contributed to improving the accuracy of mapped ocean uses and identified critical data gaps, additional datasets, and areas requiring further verification.
4. **Input into Future Scenario Development**
   Participants contributed to discussions on future scenarios by highlighting key drivers of change, emerging sector trends, and considerations necessary to ensure that scenarios remain realistic, relevant, and aligned with national priorities.
5. **Strengthened Multi-Sector Collaboration and Shared Understanding**
   The workshop facilitated cross-sector dialogue, enabling stakeholders to better understand competing and complementary ocean uses, while strengthening partnerships to support the continued development and implementation of the BSOP.

The insights and outputs generated during this workshop will directly inform the refinement of Belize's Marine Zoning Framework and support the continued development of the Belize

Featured Presentations

Day 1 – Session 1

Presentation: **Where Are We Now?**

Presenter: ***Janel McNab, CZMAI***

The opening technical presentation of the workshop provided participants with a consolidated overview of progress achieved under the Marine Spatial Planning (MSP) process and positioned stakeholders for the transition into the future planning phase of the Belize Sustainable Ocean Plan (BSOP).

Ms. McNab began by acknowledging the contributions of the MSP Unit and broader CZMAI team who have supported the planning process over the past five years. She then provided participants with a refresher on the concept of MSP, describing MSP as a strategic approach to organizing how marine space and resources are used in order to balance ecological, economic and social objectives. Drawing comparisons to land-use or city planning, she emphasized that MSP seeks to guide how activities within Belize's marine space are coordinated so that competing ocean uses can coexist while protecting ecosystem health and supporting sustainable development.

The presentation highlighted the key functions of MSP, including organizing ocean uses, balancing competing sectoral interests, reducing spatial conflicts, protecting marine ecosystems and supporting sustainable economic growth. Participants were reminded that Belize's marine space supports multiple sectors such as fisheries, tourism, conservation and emerging economic activities. She also added that the MSP process is intended to provide a framework for managing these interactions in a way that promotes long-term sustainability while minimizing conflict between uses.

Ms. McNab further emphasized that effective MSP relies heavily on stakeholder participation and the provision of accurate sector data. She noted that much of the information used within the BSOP process, including spatial datasets, ocean-use mapping, and sector priorities, has been generated through consultations, surveys and technical engagements with stakeholders. These inputs are critical in guiding evidence-based decision-making and ensuring that the plan accurately reflects the realities of ocean use within Belize.

The presentation also underscored the broader governance and climate resilience benefits of MSP. MSP supports improved ocean governance by strengthening coordination among sectors and government agencies while also enabling Belize to respond more effectively to climate change impacts and emerging marine activities. Importantly, Ms. McNab noted that the BSOP is intended to serve as a long-term planning instrument that will guide sustainable ocean management well into the future.

In outlining Belize's national commitments, Ms. McNab highlighted progress made toward biodiversity protection targets under the BSOP framework. She noted that Belize has already achieved approximately 25.05% marine protection, marking the successful completion of Milestone 5, which included the updating of the Integrated Coastal Zone Management (ICZM) Plan2025-2030 and the approval and gazetting of the Integrated Coastal and Ocean Management (ICOM) Act, No. 21 of 2025. The next phase of work will focus on achieving Milestone 6, which aims to expand Biodiversity Protection Zones to a total of up to30% of Belize's ocean by 2026, , consistent with international conservation commitments such as the global "30 by 30" target.

The presentation concluded with a reflection on the broader MSP process and the progress made to date. Ms. McNab described the structured planning framework being followed, which includes a series of defined steps encompassing governance establishment, stakeholder engagement, data collection, spatial analysis and scenario development. She highlighted the extensive stakeholder engagement that has taken place throughout the process, including community consultations, sector meetings, and the Ocean Use Survey conducted in 2024, all of which have contributed valuable data and insights to inform the development of the BSOP.

Overall, the session provided participants with a comprehensive overview of the MSP journey to date, reaffirmed the importance of stakeholder collaboration, and set the stage for the workshop's subsequent discussions on future planning and scenario development toward achieving Milestone 6.

Day 1 – Session 2

Presentation: ***Compatibility Matrix***

Presenters: ***Samir Rosado and Delwin Guevara, CZMAI***

Mr. Samir Rosado from the Coastal Zone Management Authority and Institute (CZMAI) introduced the compatibility matrix and its role in the Marine Spatial Planning (MSP) process. He explained that the workshop was designed to function primarily as a working session rather than a series of presentations, allowing participants to actively contribute their sector knowledge to the planning process.

The presentation highlighted that the MSP process was transitioning from the existing conditions phase to future spatial planning. While the project team had developed a preliminary understanding of current spatial uses and demands within Belize's marine environment, the next step required anticipating how marine space may need to be allocated to accommodate future activities and sustainable development.

Participants were reminded that, during the workshop discussions and exercises, they were expected to represent the perspective of their respective sector rather than only their individual organization. This sector-based perspective is essential for MSP because planning decisions are typically informed by broad sector interactions and spatial demands.

Mr. Rosado also revisited the compatibility matrix exercise conducted during the first workshop, where participants were asked to evaluate how different human activities and environmental features interact within the marine space. During that earlier activity, participants assessed compatibility using a four-point scoring system ranging from compatible to conflicting.

Based on feedback from that exercise, the project team simplified the scoring framework. The categories "moderately compatible" and "moderately conflicting" were merged into a single "moderate" category. This adjustment reduced confusion and created a clearer scoring system for evaluating interactions between marine uses.

The updated compatibility matrix was developed using inputs gathered from previous workshops and consultations with technical working groups. The purpose of the current exercise was therefore not to create a new matrix, but rather to validate the compatibility scores already assigned and ensure they accurately reflect sector knowledge and operational realities.

Day 1 – Activity 1

Activity 1: **Implementation and Outputs of the Compatibility Matrix Exercise**

Presenter: **Samir Rosado, CZMAI**

Following the presentation on the compatibility matrix framework, participants engaged in a sector-based validation exercise designed to review and confirm the compatibility scores assigned to interactions between marine uses and ecosystem features. Using a printed compatibility matrix, sector groups were asked to identify potential marine spatial conflicts.

Participants were divided into five (5) sector groups representing key marine use areas: Fisheries, Tourism, Marine and Coastal Development, Maritime Administration, and Marine and Coastal Ecosystems. Each group was provided with a printed compatibility matrix specific to their sector, along with a physical map illustrating the spatial distribution of activities relevant to that sector.

Each table identified a lead facilitator responsible for documenting the group's discussions and recording recommended changes to the compatibility scores. Participants reviewed interactions between activities within their sector and other marine uses included in the matrix. Where participants agreed with the assigned compatibility score, no action was required. However, where participants believed that the assigned score did not accurately reflect sector knowledge or operational realities, they placed a numbered sticky dot on the relevant matrix cell.

For each flagged interaction, participants recorded a short-written explanation on a flipchart, documenting the rationale for the proposed change and recommending a revised compatibility score. These notes were collected by facilitators and later consolidated into sector-specific compatibility findings.

Upon completion of the exercise, each of the five sector tables reported back to the plenary. Table leads presented highlights of their discussions, identifying interactions where compatibility scores required revision and explaining the reasoning behind their recommendations. These presentations allowed participants from other sectors to provide feedback, clarify assumptions, and contribute additional perspectives where relevant.

The exercise generated a set of sector-based recommendations for refining the compatibility matrix. Participants identified several interactions where the assigned compatibility scores did not align with sector knowledge, particularly in cases involving operational safety, environmental impacts, and regulatory considerations. In many instances, activities were classified as "moderately compatible", reflecting situations where activities may coexist but require monitoring, spatial planning, or management measures.

Participants also identified interactions that should be considered "incompatible", particularly where activities pose environmental risks, operational conflicts, or regulatory restrictions. In some cases, participants noted that certain activities occur in different geographic areas and should therefore be classified as having "no spatial overlap".

The outputs from this exercise provided valuable stakeholder input to validate and refine the compatibility matrix. The detailed sector-specific findings from the exercise are presented in the following sections of this report.

Highlights from Sector Report-Back

At the conclusion of the compatibility matrix review exercise, each sector table presented a summary of the key adjustments and observations identified during their discussions. These report-backs provided an opportunity for participants to highlight sector-specific considerations and clarify the rationale behind proposed compatibility score changes.

Fisheries

During the report-back session, the Fisheries sector group discussed several compatibility considerations related to fisheries operations, emerging marine industries, and scientific research. Participants noted that the group included representatives from different fisheries perspectives, which contributed to a broad discussion on how fisheries activities interact with other marine uses.

One of the key discussions focused on the interaction between seaweed farming and subsistence fishing activities. Participants debated whether these activities should be considered incompatible or moderately compatible. The group ultimately agreed that the interaction should remain moderately compatible, noting that future developments in seaweed farming could create opportunities for small-scale fishers. Classifying the activities as incompatible could potentially limit future livelihood options for fishing communities.

Participants also highlighted real-world examples of spatial conflict, particularly between fishing activities and seaweed farming infrastructure. These examples illustrate how overlapping uses may require careful planning and coordination to minimize conflicts among marine users.

Another adjustment discussed involved Sargassum containment measures, which were previously classified as incompatible with certain fishing activities. The group recommended revising this interaction to moderately compatible, explaining that containment systems can be deployed in ways that allow fishing vessels to navigate around them and access fishing areas without significant obstruction.

The group also emphasized the importance of scientific research activities within marine spaces. Participants noted that scientific research should generally be considered compatible with other marine uses because research plays a critical role in understanding marine ecosystems and informing management decisions. While research activities may sometimes involve operational risks depending on the environment, participants stressed that scientific data collection remains essential for effective marine resource management.

Overall, the Fisheries sector highlighted the importance of considering future development opportunities, spatial conflicts between emerging industries and traditional fisheries, and the role of science in supporting sustainable marine management.

Maritime Administration

During the report-back session, the Maritime Administration group highlighted several observations related to operational maritime activities and their compatibility with other marine uses. The group reviewed interactions involving port and harbour operations, water taxi operations, maritime security and enforcement, moorings, navigational aids, shipping, and recreational activities.

Participants reported identifying over forty compatibility adjustments based on sector knowledge of maritime operations and navigational safety considerations. One key observation was the need to differentiate port and harbour operations when assessing compatibility with other activities. Participants noted that port functions involve specific operational contexts that may differ from broader harbour activities and therefore require separate consideration within the compatibility matrix.

The group also discussed the distinction between maritime security and enforcement functions. While enforcement agencies may have the authority to regulate multiple activities, participants emphasized the importance of considering the security dimension of maritime operations, particularly where restricted zones may limit the coexistence of other marine uses.

Two examples of compatibility adjustments were highlighted during the presentation. First, interactions between moorings and restoration activities were reclassified from incompatible to moderately compatible, noting that moorings may be used to mark restoration sites and raise awareness among marine users. However, participants stressed that the placement of moorings must be carefully managed to avoid damaging restoration areas.

Second, the group reviewed interactions between navigational aids and port and harbour dredging activities. While previously classified as incompatible, participants recommended revising this interaction to moderately compatible, explaining that navigational aids can help identify dredging zones and improve awareness among vessel operators, thereby supporting navigational safety.

Participants noted that a full set of compatibility adjustments identified by the sector group would be documented and shared following the workshop.

Marine and Coastal Ecosystems

During the report-back session, the Marine and Coastal Ecosystems sector group reviewed interactions between fourteen (14) ecosystem features and approximately sixty-five (65) marine activities. Participants focused on assessing how human activities may interact with sensitive marine habitats and identifying areas where compatibility classifications required clarification or revision.

One of the key areas of discussion was the role of scientific research activities within marine ecosystems. Participants noted that scientific research is essential for understanding ecosystem processes and informing management decisions. While research activities may overlap with other marine uses, the group generally agreed that research should be considered compatible with most ecosystem features, provided that appropriate safeguards and methodologies are applied.

The group also emphasized the need for greater clarity in the classification of certain ecosystem features, particularly the distinction between nesting and congregation areas

and turtle nesting sites. Participants noted that nesting and congregation areas may include a wider range of species and ecological functions, while turtle nesting sites represent a more specific habitat category. Clarifying these definitions would help ensure that compatibility scores accurately reflect ecological sensitivities.

Another issue raised during the discussion involved the interaction between traditional beach trap fishing and certain ecosystem features. Participants noted that the classification of this activity as incompatible with sandy coastal environments may not reflect real-world practices, as beach traps are traditionally deployed in these areas. The group recommended further review to ensure that compatibility scores align with how these fishing practices actually occur in coastal environments.

Participants also raised questions about the definition of cruise tourism as an activity. Specifically, the group suggested clarifying whether the activity refers to the presence of cruise ships in marine waters or the associated impacts of large numbers of tourists visiting coastal destinations. This distinction may influence how cruise tourism interacts with ecosystem features within the compatibility matrix.

Overall, the Marine and Coastal Ecosystems sector emphasized the importance of clear ecosystem definitions, improved activity classifications, and the integration of scientific research to inform marine spatial planning decisions.

Marine and Coastal Development

During the report-back session, the Marine and Coastal Development group shared that they identified seventy-one (71) proposed changes to the compatibility matrix. Participants explained that many of their revisions involved reclassifying interactions that had originally been marked as incompatible to moderately compatible, where activities may coexist but would require monitoring, management, or spatial controls.

A major point raised by the group was the treatment of illegal or prohibited activities within the matrix. Participants expressed strong views that activities such as illegal fishing and gillnet use should not be treated as normal marine uses within the planning framework. At the same time, the discussion acknowledged that some prohibited or harmful activities continue to occur in practice and may still require policy attention, enforcement, and special consideration within marine planning processes.

The group also recommended removing or revisiting liquid sewage disposal as an activity within the matrix. Participants noted that this category required clarification, particularly in

relation to what types of discharge are legally permitted under international conventions and how those uses should be treated within the marine planning context.

Another key issue raised was the need to clarify the meaning of sargassum management

and sargassum containment booms recognized as a subcategory of sargassum management of. Participants observed that some definitions were not sufficiently precise, which made it difficult to judge compatibility consistently across interactions.

The group also discussed sand and gravel mining, noting that this activity does not occur within the marine or coastal seascape but is instead conducted inland, as confirmed by the Inspector of Mines (Mining Unit). As such, participants agreed that sand and gravel mining falls outside the scope of the Marine Spatial Planning (MSP) process and the BSOP, and should therefore be removed entirely from the compatibility matrix.

A further observation concerned the role of navigational aids, which participants generally viewed as broadly compatible because they support maritime safety and help identify operational areas. The discussion distinguished navigational aids from other infrastructure such as moorings, emphasizing the need to consider their functional differences within the matrix.

Overall, the Marine and Coastal Development sector emphasized the need for clearer activity definitions, better distinction between legal and prohibited uses, and more precise treatment of development-related activities that affect the coastal-marine interface.

A significant portion of the discussion following the presentation focused on technical clarification, particularly around the treatment of prohibited activities, sewage discharge, ballast water, and inland extraction activities. These exchanges underscored the need for the compatibility matrix to distinguish between activities that are legally recognized, activities that are prohibited but still occurring, and activities that fall partly outside the scope of the BSOP. Tourism

During the report-back session, the Tourism sector group presented several recommendations to refine the compatibility matrix, with particular emphasis on terminology clarification, visitor safety, and the protection of cultural and historic assets.

A major issue raised by the group was the need for clearer definitions of several activity categories. Participants noted that some terms in the matrix created confusion and may have been interpreted differently across tables. Examples included the grouping of

snorkelling/scuba diving with fishing activities, the use of the term "cultural fishing," and the distinction between sargassum containment booms and broader sargassum management activities. The group suggested that clearer terminology would improve consistency in how participants assess compatibility across sectors.

The Tourism group also recommended revising several activity labels. Participants suggested that:

- "Cultural fishing" should be clarified through a formal definition, as the term was interpreted differently across participants and could refer to cultural value, traditional practice, or Indigenous fishing practices.
- "Sargassum management" should be distinguished from containment booms, with a preference for using a more specific term such as "sargassum collection" where the activity involves active mechanical removal.
- "Brackish/grey water from boats" should be corrected to "ballast water" where that is the intended use.

In terms of compatibility scoring, the group highlighted concerns about interactions between tourism activities such as swimming, snorkeling, and scuba diving and various forms of fishing that involve hooks and lines. Participants noted that these uses may coexist, but only with monitoring and management measures in place to address safety risks to swimmers, snorkelers, and divers. As a result, the group recommended changing several of these interactions from compatible to moderately compatible.

Another key discussion focused on cultural and historic conservation areas, particularly in relation to educational tourism and other tourism uses. Participants noted that historic and cultural sites are fragile and, once damaged, cannot be restored in the same way as natural ecosystems. For that reason, the group recommended stronger management and oversight for activities occurring in these areas, including changing some interactions from compatible to moderately compatible or incompatible, depending on the level of potential impact.

The discussion that followed the presentation further reinforced the importance of definitional clarity. Participants from different tables noted that terms such as cultural, traditional, and Indigenous may carry different meanings and implications. It was agreed that these terms should be carefully defined in the final matrix to avoid inconsistent interpretation during sector reviews.

Overall, the Tourism sector emphasized the need for clear terminology, stronger safety management where tourism overlaps with extractive activities, and precautionary protection of cultural and historic assets within the compatibility matrix.

Key Cross-Sector Observations from the Compatibility Matrix Exercise

The Compatibility Matrix review exercise provided an opportunity for participants from multiple sectors including Fisheries, Tourism, Maritime and Coastal Development, Maritime Administration, and Marine and Coastal Ecosystems to assess whether the assigned compatibility scores accurately reflected real-world spatial interactions within Belize's marine environment. While each sector evaluated interactions through its own operational perspective, several common themes and patterns emerged across the tables.

1. **Predominance of Moderately Compatible Interactions**

   Across all sector tables, the majority of interactions were classified as moderately compatible. Participants emphasized that many marine activities could coexist within the same marine space, but only when appropriate spatial planning, monitoring, and operational coordination measures are in place. Examples included interactions between fisheries and maritime transport routes, tourism and conservation activities, offshore infrastructure and marine ecosystems, and port operations and coastal development activities.

   This finding reinforces the central role of the MSP process in managing shared marine spaces and balancing competing uses through zoning, management guidelines, and monitoring mechanisms.

2. **Importance of Spatial Separation Between Activities**

   Many interactions were classified as no spatial overlap because the activities occur in different geographic zones or ecological environments. Participants highlighted the importance of recognizing spatial distinctions such as offshore versus coastal activities, shallow-water versus deep-sea fisheries, and beach habitats versus marine operational zones.

   For example, fisheries activities such as pelagic fishing were noted to occur offshore and therefore have limited overlap with coastal uses such as beach traps or turtle

nesting areas. Similarly, certain ecosystem features such as seamounts occur in offshore areas that do not typically intersect with coastal development activities.

These findings emphasize the importance of clearly defining spatial zones within the marine planning framework.

3. **Environmental Protection as a Cross-Sector Priority**

Participants across multiple sectors emphasized the need to protect sensitive ecosystems and habitats. Coral reefs, mangroves, seagrass beds, turtle nesting beaches, and wildlife congregation areas were repeatedly identified as areas that require precautionary management when considering compatibility with other marine uses.

Interactions involving wildlife tourism, coastal development, dredging activities, and overwater infrastructure were frequently classified as moderately compatible due to the need for environmental safeguards and monitoring.

This highlights the importance of integrating ecosystem protection considerations into spatial planning decisions.

4. **Pollution-Related Activities Identified as Incompatible**

Pollution-related activities were consistently identified as incompatible with several marine uses, particularly tourism, fisheries, and ecosystem protection objectives. Activities such as liquid sewage discharge and grey water discharge were highlighted as posing risks to marine water quality, public health, and the ecological integrity of coastal habitats.

Participants recommended that such activities be carefully regulated and monitored to ensure that they do not compromise the sustainability of marine resources and tourism-dependent areas.

5. **Recognition of Safety and Operational Constraints**

Several interactions were identified as incompatible due to operational safety considerations, particularly in areas involving maritime transport and infrastructure. Maritime administration representatives noted that certain activities cannot occur

within shipping lanes, security zones, or operational port areas due to navigational safety and regulatory requirements.

Similarly, tourism representatives highlighted safety risks associated with overlapping uses such as fishing activities occurring in swimming or snorkeling areas.

These findings underscore the importance of incorporating operational safety considerations into spatial planning decisions.

6. **Removal of Prohibited Activities from the Matrix**

Participants from multiple sectors recommended removing activities such as illegal fishing and gillnet fishing from the compatibility matrix. These activities are prohibited under national legislation and therefore should not be treated as legitimate spatial uses within the planning framework. Removing prohibited activities from the matrix will help ensure that the compatibility assessment focuses only on legal and recognized marine uses that are allowed within the marine space by users.

7. **Terminology and Structural Improvements**

Participants also recommended several terminology updates and structural adjustments to improve the clarity of the compatibility matrix. Suggestions included replacing the term "cultural fishing" with "indigenous fishing," clarifying terminology related to sargassum management activities, and correcting certain water discharge terminology. In addition, fisheries representatives recommended further differentiating fisheries activities by spatial fishing zones and gear types, while other sectors suggested refining certain activity categories to better reflect their operational context.

These recommendations will help improve the accuracy, clarity, and usability of the compatibility matrix as a planning tool.

Sector Findings

This section summarizes the key observations and compatibility adjustments identified by each sector group during the Compatibility Matrix review exercise. Participants reviewed the assigned compatibility scores and provided recommendations based on their sector-specific knowledge of marine activities, spatial interactions, operational considerations, and environmental sensitivities.

While the narrative below highlights the main themes and issues raised during the sector report-backs, the complete records of the compatibility score adjustments, numbered interactions, and participant rationales are presented in Appendix 6: Compatibility Matrix Exercise – Sector Raw Data.

Fisheries

The Fisheries sector identified several compatibility considerations related to the spatial distribution of fisheries activities and their interaction with other marine uses. Participants noted that many fisheries' activities occur in distinct marine zones, particularly where offshore pelagic fishing occurs separately from nearshore activities. As a result, several interactions were classified as having no spatial overlap, reflecting the geographic separation between offshore fishing operations and certain coastal or habitat-based features.

A significant number of interactions were classified as moderately compatible, indicating that fisheries activities may coexist with other marine uses but require spatial planning, operational coordination, and monitoring to reduce potential conflicts. Examples included interactions between pelagic fisheries and maritime transport activities, port and harbour operations, and offshore infrastructure.

Participants also identified several incompatible interactions, particularly where water quality or habitat impacts could affect fisheries operations. For example, potential contamination from vessel discharges was identified as a concern for aquaculture activities, while development activities near landing facilities were noted as potentially conflicting with key coastal habitats such as mangroves and turtle nesting areas.

The sector further highlighted the importance of clearly distinguishing fisheries activities by fishing environment and operational characteristics, including reef fisheries, deep slope fisheries, and deep-sea fisheries. Participants also recommended differentiating between recreational fishing activities such as flats fishing and game fishing, as well as distinguishing aquaculture operations by scale and environmental footprint. These distinctions were identified as important for improving the accuracy of compatibility assessments and informing future marine spatial planning decisions.

Tourism

The Tourism sector reviewed the compatibility matrix with a focus on visitor safety, environmental quality, and the protection of cultural and historical marine resources. Participants identified several interactions where compatibility scores required adjustment based on the operational realities of tourism activities.

A number of interactions between tourism activities and fishing operations were reclassified as moderately compatible, particularly where fishing gear such as lines and hooks may present safety risks to swimmers, snorkelers, and divers. Participants emphasized that these activities could coexist but require appropriate monitoring, management, and spatial separation to reduce potential safety conflicts.

Participants also highlighted several terminology adjustments to improve clarity and consistency within the matrix. These included recommending the replacement of the term *"cultural fishing"* with *"indigenous fishing"* to better reflect recognized fishing practices, updating *"sargassum management"* to *"sargassum collection"*, and correcting *"brackish grey water"* to *"ballast water."* These changes were considered necessary to reduce ambiguity and ensure consistent interpretation across sectors.

The sector further emphasized the need to protect cultural and historic marine sites, noting that these resources are particularly vulnerable to damage. As a result, certain tourism interactions involving cultural and historic conservation areas were recommended to be classified as moderately compatible, requiring monitoring and management to prevent irreversible impacts.

Participants also identified several incompatible interactions, particularly where tourism activities could be affected by pollution risks such as sewage discharge and grey water discharge. These activities were considered incompatible due to their potential to negatively affect water quality and visitor experiences.

Overall, the Tourism sector concluded that tourism activities can coexist with many other marine uses when supported by appropriate spatial planning, monitoring mechanisms, and environmental safeguards.

Marine & Coastal Development

The Marine and Coastal Development sector reviewed the compatibility matrix with particular attention to interactions involving coastal infrastructure, dredging activities, and

shoreline development. Participants identified a number of interactions where compatibility scores required adjustment based on the operational realities of coastal development activities and their potential environmental impacts.

Several interactions initially classified as incompatible were reconsidered and recommended as moderately compatible, recognizing that certain development activities may occur alongside other marine uses when appropriate environmental safeguards, regulatory oversight, and spatial planning measures are implemented. Participants emphasized that development-related activities often require site specific assessments and mitigation measures to reduce potential environmental impacts.

Discussions within the sector also highlighted the need for clearer definitions of certain development-related activities, including dredging operations, overwater structures, and coastal infrastructure. Participants noted that improved clarity in activity descriptions would help ensure more consistent interpretation of compatibility scores across sectors and improve the reliability of future compatibility assessments.

The sector also raised policy-related considerations, noting that certain development activities may be restricted under existing legislation or national policy frameworks. Participants emphasized that while some activities may be regulated or discouraged, they may still need to be considered within the matrix to support planning and management discussions.

Maritime Administration

The Maritime Administration sector focused on compatibility considerations related to navigation safety, port and harbour operations, maritime transport, and regulatory oversight. Participants reviewed interactions involving shipping routes, water taxi operations, maritime security and enforcement activities, navigational aids, moorings, and dredging activities.

Several interactions were adjusted to be moderately compatible, reflecting the reality that maritime activities frequently operate within shared marine spaces but require careful coordination to ensure navigational safety and operational efficiency. For example, participants noted that navigational aids can improve safety around dredging activities, while the placement of moorings may assist in marking designated operational areas such as restoration sites.

The sector also highlighted the importance of aligning compatibility considerations with international maritime conventions and operational requirements, particularly in relation to vessel operations, ballast water management, and maritime safety regulations. Participants emphasized that maritime transport activities are essential for economic development and must be managed alongside other marine uses to maintain safe and efficient navigation corridors.

Marine and Coastal Ecosystems

The Marine and Coastal Ecosystems sector emphasized the ecological significance of Belize's marine habitats, including coral reefs, mangroves, seagrass beds, turtle nesting areas, and seamount ecosystems. Participants highlighted that many interactions involving these habitats require precautionary management due to their ecological sensitivity and importance for biodiversity conservation.

Several ecosystem-related interactions were identified as moderately compatible, indicating that certain activities may occur within or near these habitats when appropriate environmental safeguards, monitoring mechanisms, and regulatory controls are applied. Participants stressed that careful spatial planning is necessary to minimize potential impacts on critical habitats and ecosystem functions.

The sector also underscored the importance of scientific research and conservation activities in supporting effective marine management. Research activities were generally considered compatible with other marine uses, provided that they are conducted in accordance with established environmental guidelines and safety protocols.

Participants emphasized that maintaining the health and resilience of marine ecosystems is essential for supporting the long-term sustainability of fisheries, tourism, and other marine-based economic sectors.

Day 1 – Session 3

Presentation: ***Prioritization of Human Uses***

Presenter: ***Samir Rosado, CZMAI***

This session introduced the concept of prioritizing human uses within the marine spaces as a necessary step in the Marine Spatial Planning (MSP) process. Building on the previous compatibility exercise, facilitators Samir Rosado and Delwin Guevara guided participants through the process of determining how decisions might be made when multiple compatible or competing activities occur within the same marine area. The discussion emphasized that while compatibility analysis helps identify which uses can coexist, prioritization is required when space allocation decisions must be made between different sectors.

To initiate the exercise, participants were asked to consider what key criteria should guide prioritization decisions. Through an interactive Mentimeter activity, participants proposed several considerations that could inform spatial decision-making. These suggestions were synthesized into four main criteria: livelihood importance, safety, environmental impact, and economic contribution. The facilitators emphasized that these criteria would serve as a structured basis for evaluating competing uses and ensuring balanced decision-making that accounts for social, economic, and environmental objectives.

Participants were encouraged to approach the exercise from a sector perspective, temporarily setting aside local or community-specific considerations to focus on broader sector priorities. The facilitators explained that localized perspectives would be incorporated later during community-level consultations. Participants then engaged in ranking the identified criteria to determine their relative importance when assessing which activities should take precedence within the shared marine space.

Overall, the session helped participants understand how prioritization frameworks can support transparent and evidence-based spatial planning. By identifying common decision-making criteria, the exercise laid important groundwork for subsequent scenario planning and zoning discussions within the MSP process.

Discussion Highlights: Draft Vision Statement for the BSOP

A key point raised during the Day 1 discussions was the distinction between the vision for the overall BSOP process and the need to develop a specific vision statement for the Plan itself. Participants acknowledged that while the process guiding the Marine Spatial Planning (MSP) and BSOP engagement already had an established vision, the workshop was expected to develop a separate, forward-looking vision that articulates the desired long-term state of Belize's ocean space. This distinction was emphasized to ensure that the vision statement would serve not only as a guiding principle for the planning process, but more importantly as a strategic expression of what the Plan seeks to achieve for Belize's marine environment and the communities that depend on it.

The vision statement was also positioned as one of the core outputs of the future planning stage of the workshop. Alongside the identification of emerging uses, the validation of future scenarios, and the development of the zoning framework, participants recognized that the vision statement would play a central role in shaping subsequent planning decisions. Rather than existing as an isolated statement, it was understood that the vision would provide strategic direction for future scenario development and inform how zoning options are assessed, refined, and ultimately implemented within the BSOP framework.

A recurring theme throughout the discussion was the need for the vision statement to reflect long-term and intergenerational planning horizons. Participants were encouraged to think beyond immediate operational or sector-specific needs and instead consider what Belize's marine space should look like over the next 10, 20, and 30 years. This long-range perspective reinforced the importance of developing a vision that is future-oriented, resilient, and capable of guiding decisions that will continue to benefit future generations.

Participants further emphasized that the vision must support the development of an equitable, implementable, and enforceable ocean zoning framework. It was noted that the vision should translate into a practical planning tool that can be operationalized across sectors while remaining aligned with national priorities. This included ensuring that the future zoning framework is realistic, enforceable, and capable of balancing ecological protection with sustainable use and economic opportunity. The emphasis on equity also highlighted the need for fair representation of different sectors, user groups, and communities within the planning process.

Another important discussion point was the need for the vision statement to align with national development goals and blue economy priorities. Participants linked the draft vision

to broader national objectives, including biodiversity conservation commitments, sustainable economic growth, community prosperity, and investment planning. The vision was therefore seen as a mechanism for supporting Belize's broader sustainable development agenda while strengthening marine resource governance and long-term ocean resilience.

The discussion also highlighted that the vision must be inclusive and collectively owned by all sectors and stakeholders. Participants stressed that the BSOP should not be perceived as belonging to any one sector or institution, but rather as a shared national framework shaped by and for fisheries, tourism, conservation, maritime transport, coastal development, energy, and coastal communities. This emphasis on shared ownership reinforced the importance of ensuring that the vision statement reflects a broad, multi-sectoral consensus and resonates across the diverse groups engaged in Belize's marine space planning.

Overall, several strong themes emerged from the discussion that are likely to underpin the final draft vision statement. These included sustainability, equity, balanced use, conservation, economic prosperity, enforceability, long-term resilience, and shared ownership. Collectively, these themes provide a strong foundation for articulating a vision that is both aspirational and grounded in Belize's long-term national priorities for ocean stewardship.

Day 1 – Activity 2

Activity 2: **Prioritization of uses within each sector**

Presenter: **Samir Rosado, CZMAI**

Highlights from Sector Report-Back

During the latter part of Day 1, Samir Rosado facilitated the Prioritization Activity, which built upon the earlier compatibility and characterization exercises. At this stage of the workshop, participants had already identified sector activities and assessed how different uses interact within Belize's marine space. The prioritization exercise was therefore designed to help participants determine which ocean uses and decision-making considerations should carry the greatest weight when spatial conflicts arise.

Participants worked in sector-based groups at their assigned tables and were asked to review the list of ocean uses associated with their sector. The first part of the exercise required each group to identify and rank the most important uses within their sector, ultimately agreeing on the top five priority activities that must be considered when planning the allocation of marine space. These rankings were captured digitally through the Mentimeter (Menti) platform, allowing the facilitation team to compile and visualize the sector priorities across the room.

In the second part of the activity, participants discussed and identified the key considerations that should guide prioritization when multiple uses overlap within the same marine area. Groups reflected on broader planning criteria such as:

- Dependence of communities and livelihoods on the activity
- Economic contribution (e.g., GDP or economic value)
- Climate change considerations (e.g., sea level rise, sea surface temperature impacts)
- Governance and policy frameworks that influence sector activities

Participants used these considerations as a framework to discuss how difficult spatial planning decisions might be made when competing uses cannot coexist in the same area. Through facilitated dialogue, groups worked toward identifying which criteria should be given the greatest importance in future marine spatial planning decisions.

The outputs of the activity included ranked lists of priority ocean uses within each sector and a set of sector-informed considerations for managing spatial conflicts. These results were captured for integration into the next stages of the Marine Spatial Planning process, particularly in informing scenario development and future zoning discussions.

Fisheries

The fisheries and mariculture sector emphasized the central importance of fisheries to national food security, livelihoods, and Belize's coastal economy. Participants identified commercial fishing as the highest priority activity, reflecting its economic contribution and role in sustaining fishing communities. Sportfishing was also highlighted as a major activity due to its growing contribution to the tourism economy and its reliance on healthy marine ecosystems. Mariculture activities, including seaweed and sea cucumber farming, were identified as an emerging opportunity that could support economic diversification while reducing pressure on wild fisheries resources. Participants also noted the importance of traditional and cultural fishing practices that continue to support local livelihoods.

Top 3 Priorities – Fisheries Sector

1. Commercial Fishing (Lobster, Conch, Fin Fish)
2. Sportfishing (Reef, Flats, Pelagic)
3. Mariculture (Seaweed, Sea Cucumber)

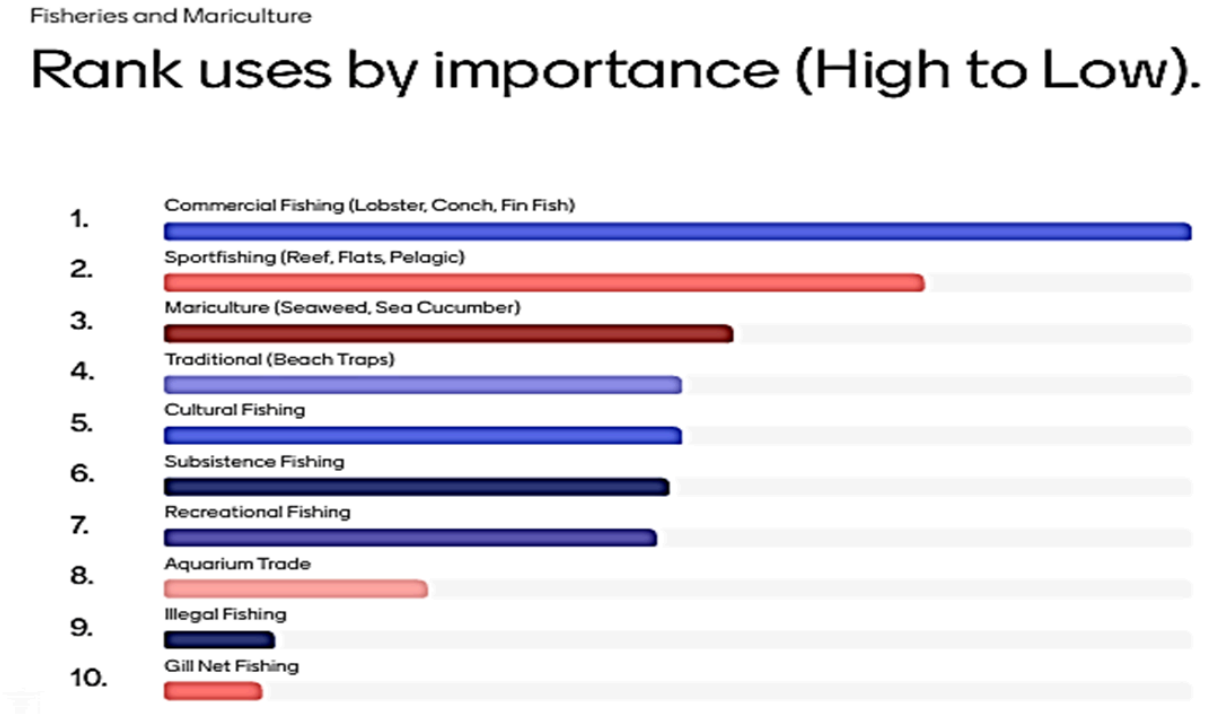


Figure 4 Ranking of Priority Uses by importance in Fisheries Sector

Maritime Administration

Representatives from the maritime sector highlighted the importance of safe, efficient, and well-regulated maritime operations within Belize's marine space. Participants noted that ports and harbor operations play a critical role in supporting national trade, transportation, and economic activity. Maritime security and enforcement were also identified as essential priorities to ensure compliance with regulations and to maintain safety within Belize's territorial waters. Water taxi services were recognized as an important transportation link connecting coastal communities and tourism destinations. Overall, the sector emphasized the need for effective maritime governance and infrastructure to support economic development while minimizing conflicts with other marine uses.

Top 3 Priorities – Maritime Administration Sector

1. Ports and Harbour Operation
2. Maritime Security and Enforcement
3. Water Taxi Services

Figure 5 Ranking of Priority Uses by Importance in Maritime Administration Sector

Marine and Coastal Ecosystems

Participants representing the marine and coastal ecosystems sector emphasized the fundamental role of ecosystem protection in sustaining all other ocean uses. Discussions underscored that healthy coral reefs, mangroves, and seagrass beds provide essential ecosystem services, including biodiversity support, coastal protection, and nursery habitats for commercially important fish species. Science and research were identified as critical tools for informing evidence-based decision-making and adaptive management. Participants also highlighted biodiversity protection and collaborative management approaches as key priorities for ensuring long-term sustainability of Belize's marine resources.

Top 3 Priorities – Maritime and Coastal Ecosystems Sector

1. Protection (Coral, Mangrove, Seagrass)

2. Science and Research
3. Biodiversity Protection

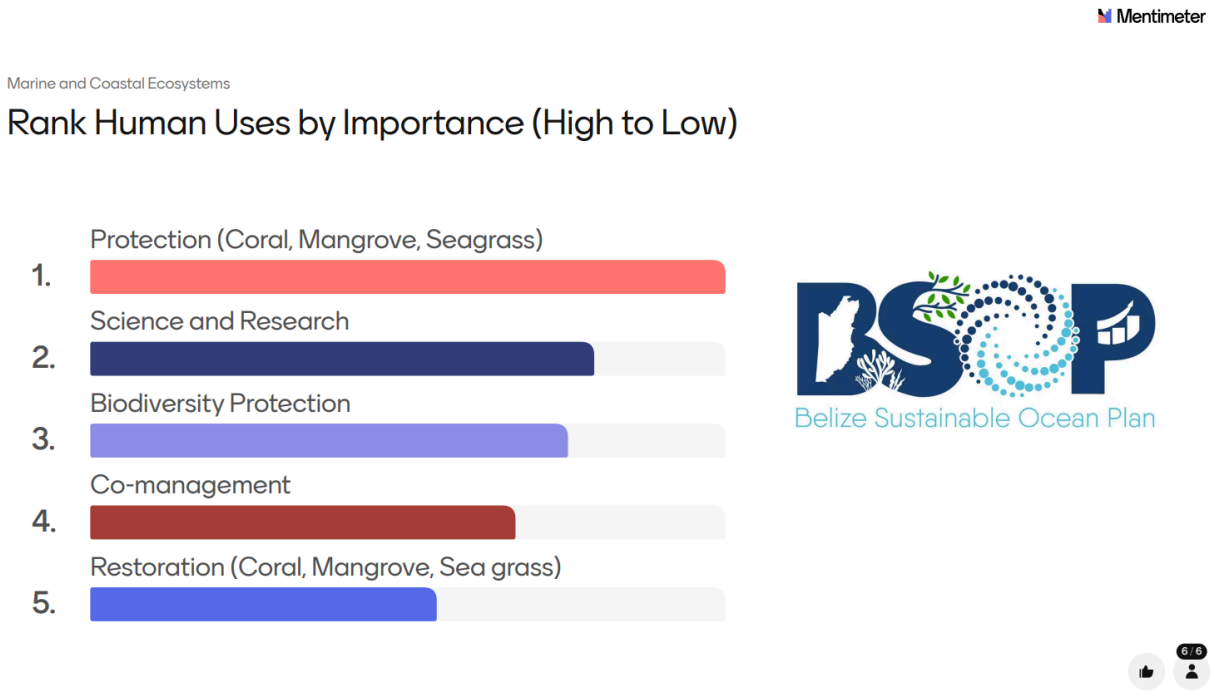


Figure 6 Ranking of Priority Uses by Importance in the Marine and Coastal Ecosystem Sector

Marine and Coastal Development

Representatives from the marine and coastal development sector focused on the infrastructure and activities necessary to support national economic development while recognizing the need to balance development with environmental sustainability. Development dredging and port-related dredging activities were identified as key priorities due to their importance in maintaining navigational access and supporting maritime commerce. Land reclamation and coastal development activities were also highlighted as significant components of coastal infrastructure expansion. Participants noted the importance of careful planning and management of these activities to minimize environmental impacts and avoid conflicts with other marine uses.

Top 3 Priorities – Maritime and Coastal Development

1. Development Dredging
2. Ports and Harbour Dredging

3. Land Reclamation / Formation

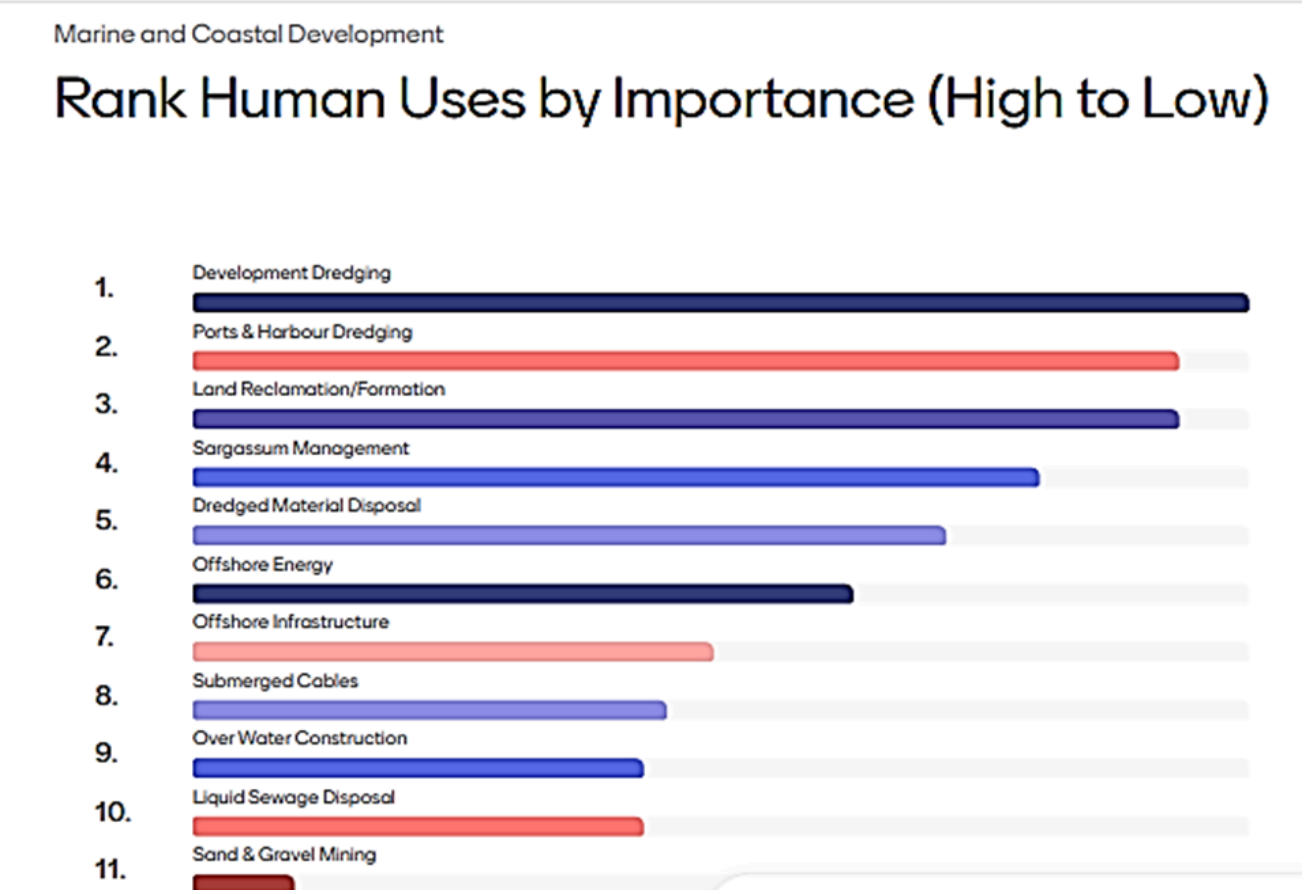


Figure 7 Ranking of Priority Uses by Importance in the Marine and Coastal Development Sector

Tourism

Participants representing the tourism sector emphasized the importance of maintaining the natural and cultural assets that form the foundation of Belize's tourism industry. Discussions highlighted that tourism activities are heavily dependent on healthy marine ecosystems and well-preserved cultural heritage resources. Stakeholders stressed that conservation and responsible tourism management are essential to maintaining Belize's competitiveness as a premier marine tourism destination. Activities such as diving and snorkeling were identified as key drivers of tourism value, while cruise tourism and other recreational activities also contribute significantly to the sector. The prioritization exercise reflected a strong focus on

conservation-linked tourism and the protection of sites that attract visitors to Belize's marine environment.

Top 3 Priorities – Tourism Sector

1. Cultural and Historic Conservation
2. Snorkeling / Scuba Diving
3. Cruise Tourism

Figure 8 Ranking of Priority Uses by Importance in the Tourism Sector

Day 2 – Session 1

Presentation: **Final Data Validation**

Presenter: ***Delwin Guevara, CZMAI***

Day Two of the workshop commenced with the first technical session focused on Final Data Validation for the Marine Spatial Planning (MSP) process. The session was facilitated by Delwin Guevara of the Coastal Zone Management Authority and Institute (CZMAI) and aimed to review and validate the spatial datasets and sectoral information that underpin the Belize Sustainable Ocean Plan (BSOP). Participants were reminded that the datasets

represented the current understanding of how different sectors utilize Belize's marine space, having been compiled through the Ocean Uses Survey, previous stakeholder consultations, and technical analyses. As such, validating this information was an essential step to ensure the accuracy and credibility of the data before advancing to scenario development and other future planning stages.

Mr.Guevara began by emphasizing the importance of stakeholder participation in confirming the reliability and completeness of the spatial information used in the MSP process. The objective of the session was not to redesign or reconstruct the datasets, but rather to confirm that the existing information accurately reflected current sector activities and spatial realities across Belize's marine environment. Participants were therefore invited to critically assess whether the data appropriately represented the uses, activities, and operational contexts of their respective sectors.

During the presentation, Mr. Guevara provided an overview of how sector-specific marine uses were captured and represented spatially using the SeaSketch platform, which serves as the primary tool for visualizing and analyzing marine spatial data within the BSOP process. He explained that information had been collected from more than 800 stakeholders through participatory mapping exercises, resulting in the identification of over 2,000 mapped spatial features representing various ocean uses across sectors. These inputs were compiled into sector-specific data layers and visualized through heat maps and spatial polygons that illustrate the geographic distribution and relative importance of marine activities throughout Belize's marine space.

The presentation also showcased several sector maps, including those representing fisheries, tourism, maritime administration, maritime and coastal development, and maritime ecosystems. These maps illustrated the spatial extent of activities such as commercial fishing grounds, transportation routes, tourism areas, coastal development zones, and ecosystem restoration sites. Participants were encouraged to examine the datasets closely and determine whether they accurately reflected the realities of their sectors, while also identifying any missing activities, spatial inaccuracies, or datasets that could enhance the completeness of the information.

Following the presentation, participants were organized into their respective sector groups and provided with validation sheets and supporting spatial materials to review the datasets associated with their sectors. Through facilitated discussions, participants assessed whether the listed ocean uses were correctly represented, whether any activities were missing or incorrectly categorized, and whether the spatial information appropriately reflected the

scale and scope of sector operations. Table facilitators supported the discussions by clarifying instructions, guiding participants through the validation process, and documenting feedback and proposed adjustments.

During the validation exercise, stakeholders identified several refinements to the datasets, including clarifications to sector classifications, confirmation of activity descriptions, and identification of potential gaps requiring further technical review. Participants also provided contextual insights into the operational realities of their sectors, helping to ensure that the datasets more accurately captured the diversity and spatial distribution of ocean-based activities in Belize.

Overall, the session reinforced the collaborative nature of the Marine Spatial Planning process by enabling sector representatives to directly review and validate the data used to inform spatial planning decisions. By the conclusion of the exercise, participants had collectively validated the majority of the sector-specific ocean-use datasets while documenting recommended corrections and additions for further technical consideration by the MSP Unit. The outcomes of this session strengthened stakeholder confidence in the technical foundation of the BSOP and ensured that subsequent planning discussions, including emerging uses, scenario development, and zoning considerations; these would be informed by datasets that more accurately reflect the current and evolving uses of Belize's marine space.

Day 2 – Activity 1

Activity 1: **Data Layer Validation**

Presenter: **Delwin Guevara, CZMAI**

Following the presentation, participants engaged in a sector-based validation exercise designed to assess the completeness, accuracy, and quality of the spatial data layers representing marine uses within Belize. Each sector group was provided with printed maps and access to the SeaSketch data viewer, allowing participants to review the spatial datasets associated with their sector in greater detail.

Participants were asked to examine whether the mapped activities and datasets accurately represented the current uses occurring within their sector and to identify any gaps or additional datasets that could enhance the spatial database. Groups were instructed to assess the data in terms of completeness, quality, and priority, and to document any recommendations for improving the datasets. Specifically, participants were asked to consider the following questions:

- Does the map accurately represent the marine uses within your sector?
- Are there any missing activities or spatial datasets that should be included?
- Are there national datasets or institutional data sources that could strengthen the information available?
- What additional data providers or institutions could contribute relevant information?

Participants recorded their observations and recommendations on sector worksheets and were invited to explore the SeaSketch platform to review additional spatial layers relevant to their sector. After completing the exercise, each sector group reported back to the plenary to share their observations and recommendations.

Highlights from Sector Report-Back

Fisheries

Participants from the fisheries sector indicated that several datasets could be expanded or clarified to better represent fisheries activities across Belize's marine space. The group highlighted the need to confirm the locations associated with the aquarium fish trade and recommended verifying existing mapped areas. Additional aquaculture locations were identified, including sites near Placencia and north of the Turneffe area, as well as locations associated with private mariculture operations.

The group also recommended incorporating additional datasets related to oyster culture, seaweed farming, and other emerging mariculture activities, noting that some of these initiatives are currently in development and may not yet have precise mapped locations. Participants further suggested including fisheries landing sites, particularly in key fishing communities such as Placencia and Sarteneja, to better represent the spatial dynamics of fisheries value chains.

Overall, the fisheries sector emphasized the importance of integrating both current and future mariculture development areas into the spatial database to ensure the MSP process adequately reflects emerging economic opportunities within the fisheries sector.

Marine and Coastal Ecosystems

Representatives from the marine and coastal ecosystems sector identified several additional restoration sites that should be reflected within the ecosystem spatial datasets. Participants highlighted coral restoration initiatives led by organizations such as Fragments of Hope, noting that multiple restoration sites had been established that were not clearly represented in the maps.

The group also referenced ongoing initiatives related to national mangrove restoration planning, indicating that updated spatial data for priority restoration sites will soon become available through upcoming national projects. Participants recommended integrating these forthcoming datasets into the SeaSketch platform to ensure that ecosystem restoration efforts are adequately reflected in the MSP planning framework.

Maritime Administration

Participants representing the maritime administration sector noted several gaps in the representation of maritime transportation routes and enforcement areas. The group recommended adding additional transportation routes used for the movement of goods and services, particularly routes connecting coastal communities and key ports.

They also emphasized the need to expand the spatial representation of maritime security and enforcement activities, noting that agencies such as the Belize Coast Guard conduct patrols across both internal waters and territorial seas, with future plans to extend monitoring into the Exclusive Economic Zone (EEZ).

Additionally, the group highlighted the need to incorporate the locations of designated ports and harbors, including important facilities such as San Pedro and Big Creek, which were not fully represented in the datasets. Participants also discussed the increasing use of drone technology for maritime surveillance, suggesting that aerial monitoring capabilities may influence how enforcement coverage is considered in marine spatial planning.

Tourism

Participants representing tourism and cultural heritage identified several marine archaeological and heritage sites with potential tourism value that were not currently reflected in the spatial datasets. The group highlighted areas around San Juan, Bacalar Chico, and Caye Caulker, where submerged cultural features and historical sites have been documented and may support heritage-based tourism activities.

Participants also pointed to areas within San Pedro and the Placencia region that present opportunities for educational tourism and research related to marine cultural heritage. While acknowledging that numerous submerged archaeological features exist throughout Belize's coastal waters, the group emphasized that only certain sites currently possess the accessibility and interpretive potential required for tourism development.

Marine and Coastal Development

Participants from the marine and coastal development sector noted that the terminology and classification used in the spatial datasets could be further refined to improve clarity. In particular, the group suggested revisiting the definitions used for residential development, commercial development, and other coastal infrastructure categories, as these distinctions were not always immediately clear within the mapping framework.

The group also recommended aligning the terminology used in the spatial datasets with the categories utilized in the compatibility matrix exercise conducted on Day 1, to ensure consistency across different components of the MSP planning process.

Additionally, participants noted the absence of spatial data representing offshore energy potential, suggesting that future planning exercises should consider incorporating data related to renewable energy opportunities and other emerging development activities in Belize's marine environment.

Day 2 – Session 2

Presentation: ***Emerging Uses***

Presenter: **Delwin Guevara, CZMAI**

The second session of Day 2 focused on Emerging Uses, facilitated by Delwin Guevara of the Coastal Zone Management Authority and Institute (CZMAI). The objective of the session was to support participants in identifying potential new or evolving ocean uses within their sectors and to assess the likelihood, compatibility, and planning implications of these activities within Belize's marine space. This exercise represented an important transition in the workshop from validating current ocean-use information toward exploring possible future developments that could influence marine spatial planning decisions under the Belize Sustainable Ocean Plan (BSOP).

Mr. Guevara began the session by explaining the importance of considering future trends in marine resource use and economic development. Participants were reminded that marine spatial planning must anticipate not only current sector activities but also potential new uses that may emerge over time due to technological advancement, economic shifts, policy changes, or environmental pressures. Identifying these emerging uses early in the planning process allows planners and stakeholders to anticipate spatial conflicts, recognize opportunities for compatible uses, and design zoning frameworks that remain adaptive and resilient over time.

The session was structured as a three-step activity consisting of: (1) identification and likelihood assessment of emerging uses, (2) compatibility analysis between emerging and existing activities, and (3) plenary reporting and discussion. Participants first worked within their sector groups to identify potential emerging activities that could reasonably occur within their sectors in the coming years. Groups were asked to consider trends, innovations, policy changes, or investment interests that might lead to new forms of marine activity. Participants also discussed the relative likelihood of these activities materializing and the potential timeframes in which they might emerge.

Following the identification of emerging uses, participants conducted a compatibility assessment using matrices provided to each sector table. In this stage of the exercise, groups evaluated how newly identified activities might interact with existing ocean uses. The analysis encouraged participants to consider whether emerging uses would be compatible with current sector activities, potentially conflict with them, or require additional management considerations to coexist effectively. Facilitators supported each table to guide discussion, clarify instructions, and document the rationale behind participant assessments.

Participants then reconvened in plenary to report back on the findings from their sector discussions. Sector representatives presented the emerging uses identified by their groups, shared perspectives on the likelihood of these activities occurring, and described areas

where potential compatibility or conflict with existing ocean uses had been identified. The report-back process enabled cross-sector learning and helped surface common themes, including potential pressures on marine space, opportunities for economic development, and areas where proactive planning or policy guidance may be required.

The Emerging Uses session generated several important outputs, including sector-specific lists of potential emerging activities, likelihood rankings for those activities, completed compatibility matrices evaluating interactions with existing uses, and documented discussion points regarding possible conflicts or planning considerations. These outputs provided valuable insight into how Belize's marine space may evolve in the future and served as key inputs for the subsequent sessions on scenario development and future spatial planning.

Overall, the session strengthened the workshop's forward-looking perspective by encouraging stakeholders to consider how changing economic, environmental, and governance conditions may shape future ocean uses. By identifying and analyzing emerging activities through a collaborative and structured process, participants contributed to building a more adaptive and informed foundation for the continued development of the Belize Sustainable Ocean Plan.

Highlights from Sector Report-Back

Fisheries

The Fisheries sector report-back centered on the growing potential for mariculture and value-added fisheries development as emerging uses within Belize's marine space. Participants identified seaweed farming, sea cucumber production, lobster seed development, and expanded oyster cultivation as high-priority emerging activities with significant potential for future expansion. The group noted that while some of these uses are still in their infancy, there is already sufficient traction and interest to justify their inclusion in future spatial planning considerations.

Particular emphasis was placed on the need to begin accounting for future mariculture zones and support infrastructure, including designated landing sites, processing facilities, and potential energy requirements for expanding fisheries operations. Participants viewed

these uses as especially important for strengthening livelihoods, diversifying the blue economy, and enhancing long-term sector resilience.

Maritime Administration

The Maritime Administration group's feedback reflected the evolving nature of maritime governance, surveillance, and transport systems. Participants identified expanded EEZ surveillance, drone-assisted patrol systems, enhanced port and harbour infrastructure, and future ballast water management mechanisms as emerging uses requiring strategic consideration.

A major discussion point was the increasing use of drone and aerial surveillance technology, which is extending monitoring and enforcement capabilities beyond traditional patrol routes. Participants noted that this shift introduces a new dimension to marine spatial planning, as surveillance and regulatory uses now extend not only across the water surface but also into above-water operational space. Additionally, anticipated improvements to port infrastructure and shipping management systems were viewed as likely developments in the medium term, particularly as Belize strengthens maritime safety and trade facilitation.

Marine and Coastal Ecosystems

The Marine and Coastal Ecosystems group identified ecosystem restoration and climate resilience interventions as key emerging uses. Discussions focused heavily on the increasing prominence of mangrove restoration, coral reef restoration, and broader habitat rehabilitation initiatives. Participants noted that restoration activities are no longer viewed solely as conservation interventions, but increasingly as strategic spatial uses that must be planned for within the BSOP framework.

The group further highlighted that several restoration initiatives are already in the pipeline, including the forthcoming national mangrove restoration plan, which is expected to generate comprehensive shapefiles and priority restoration maps. This was considered a high-likelihood emerging use, particularly given the strong alignment with national climate adaptation priorities, biodiversity commitments, and ongoing donor-supported projects.

Marine and Coastal Development

The Marine and Coastal Development sector focused on future infrastructure and energy-related uses as key emerging areas. Participants highlighted offshore energy development, coastal infrastructure expansion, and future transmission corridors as strategic uses that may become increasingly relevant over the coming years.

The discussion acknowledged that while supporting feasibility data and suitability mapping are still limited, these uses should nonetheless be incorporated into future planning scenarios. Participants also noted the importance of aligning development terminology and classifications with the broader compatibility and scenario exercises to ensure consistency across the planning process. Offshore energy, in particular, was regarded as a medium- to long-term emerging use, with strong potential depending on policy direction, investment interest, and environmental feasibility assessments.

Tourism

The Tourism, Culture and Heritage sector highlighted several specialized tourism products as emerging uses with strong growth potential. These included educational tourism, archaeological tourism, research tourism, and nautical tourism, particularly in areas already known for marine cultural heritage and visitor activity.

Participants identified opportunities in locations such as San Pedro, Caye Caulker, Placencia, and selected southern heritage corridors, where tourism could be further diversified beyond traditional leisure offerings. Particular emphasis was placed on the future potential for marine heritage interpretation, educational visitor experiences, and research-linked tourism products, which were viewed as uses likely to grow as Belize continues to position itself as a destination for sustainable and knowledge-based tourism.

Day 2 – Activity 2

Activity 2: **Emerging Uses**

Presenter: **Samir Rosado, CZMAI**

Following the data validation exercise, participants engaged in an activity focused on identifying emerging uses within Belize's marine space as part of the Marine Spatial Planning (MSP) process. The session was facilitated by Samir, who explained that the objective of the exercise was to encourage participants to begin looking beyond current ocean uses and consider new or rapidly developing activities that may shape the future use of Belize's marine environment.

Samir began by outlining the progression of the workshop discussions, noting that participants had already reviewed the compatibility matrix of current ocean uses, examined key considerations for overlap analysis, and validated the datasets that represent existing sector activities. The next step, he explained, was to look forward and identify potential emerging uses that may become significant in the near future and therefore need to be considered within the Belize Sustainable Ocean Plan (BSOP).

He defined *emerging uses* as activities that are new, innovative, or rapidly expanding, but which may not yet be fully mainstream or widely implemented. These uses may currently occur on a limited scale or be in early development stages but demonstrate strong potential for future growth or national implementation. Examples of emerging uses may include activities driven by technological innovation, new investment opportunities, evolving governance frameworks, or national policy priorities.

Participants were asked to take part in an interactive activity using the Mentimeter platform, which allowed individuals to contribute ideas anonymously and collectively. The activity was conducted in two stages:

1. **Identification of Emerging Uses**
   Participants were invited to individually submit examples of emerging marine or coastal uses they were aware of within Belize. These could include activities already gaining traction locally, pilot projects being explored, or initiatives that stakeholders believe have strong potential for future development. Participants were encouraged to draw from their sector knowledge and experiences when proposing potential emerging uses.

2. **Assessment of Development Potential**
   After the list of proposed uses was generated, participants were asked to evaluate the likelihood of each use becoming established within Belize's marine space. This was done through a rating exercise that assessed the expected timeframe for implementation:

   - **High potential**: Likely to occur within the next 5 years
   - **Medium potential**: Likely to occur within the next 10 years
   - **Low potential**: Likely to occur within 15 years or more

3. **Compatibility Review with Existing Uses**

   In the final stage of the activity, participants were asked to revisit the compatibility matrix developed during Day One and consider how the identified emerging uses might interact with existing ocean uses. Participants examined whether these new activities would likely be compatible, conditionally compatible, or potentially conflicting with current sector activities.

This step helped participants begin to anticipate future spatial interactions, potential conflicts, and opportunities for coexistence between emerging and established uses within Belize's marine space. The exercise also provided valuable insight into how the Marine Spatial Planning process may need to adapt in order to accommodate new and evolving ocean-based activities.

Samir emphasized that the purpose of the rating exercise was to help the MSP process prioritize realistic future uses, ensuring that planning efforts remain grounded in activities that have a reasonable likelihood of materializing. By assessing the probability and timeframe of emerging uses, the MSP team would be better equipped to incorporate these potential activities into future spatial analyses and planning scenarios.

The emerging uses activity served as an important bridge between the analysis of current ocean uses and the subsequent scenario development exercises that followed later in the workshop. By identifying possible future activities, participants helped ensure that the

Marine Spatial Planning process accounts not only for existing sector needs but also for anticipated economic, technological, and environmental developments that may influence how Belize's marine space is used in the coming decades.

Part I: Identification of Emerging Uses by Sector

Figure 9 QR Codes Used to Identified Emerging Uses by Sector

Mentimeter Results:

Fisheries

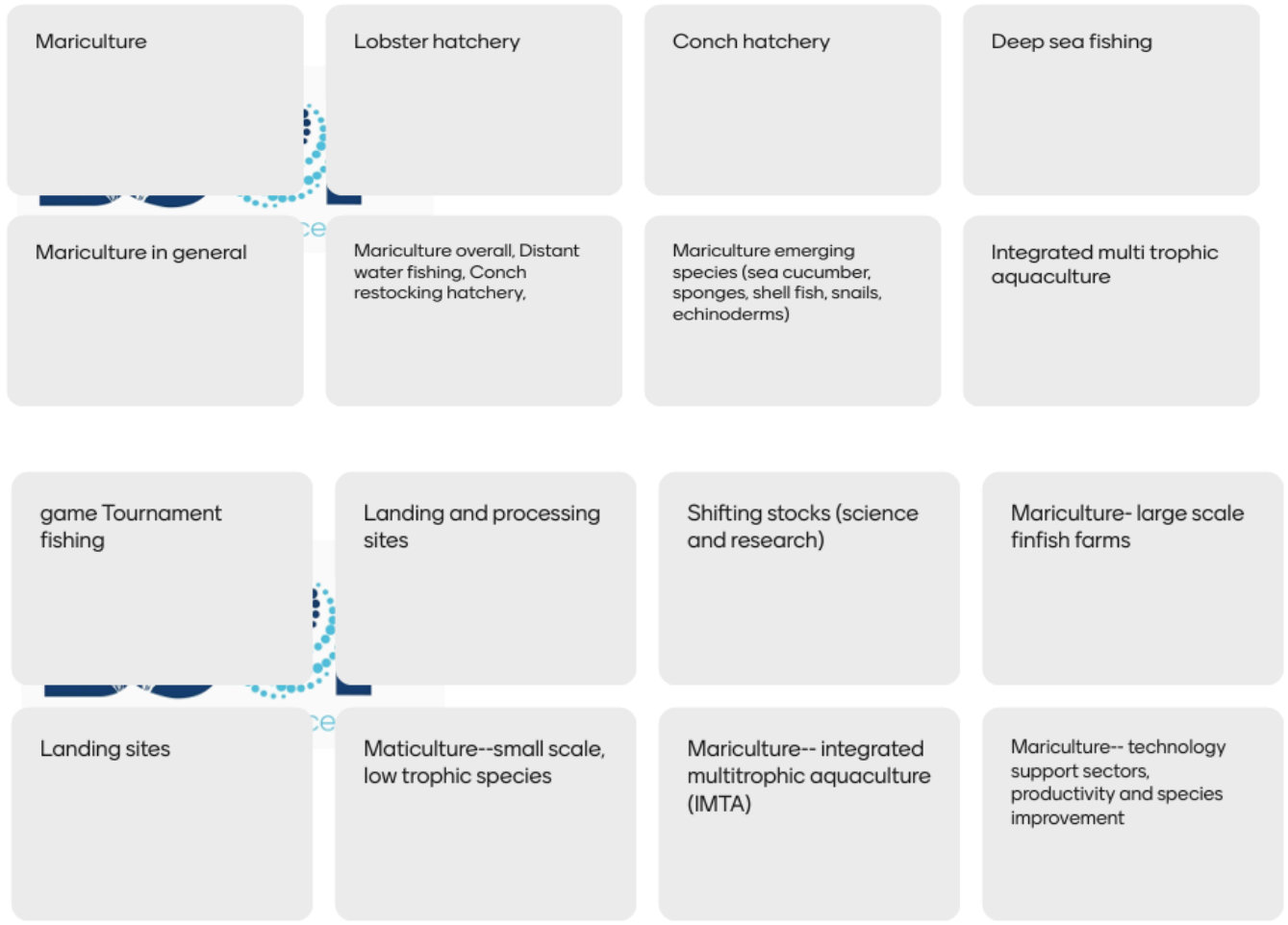


Figure 10 Emerging Marine Uses Identified for Fisheries Sector

Tourism

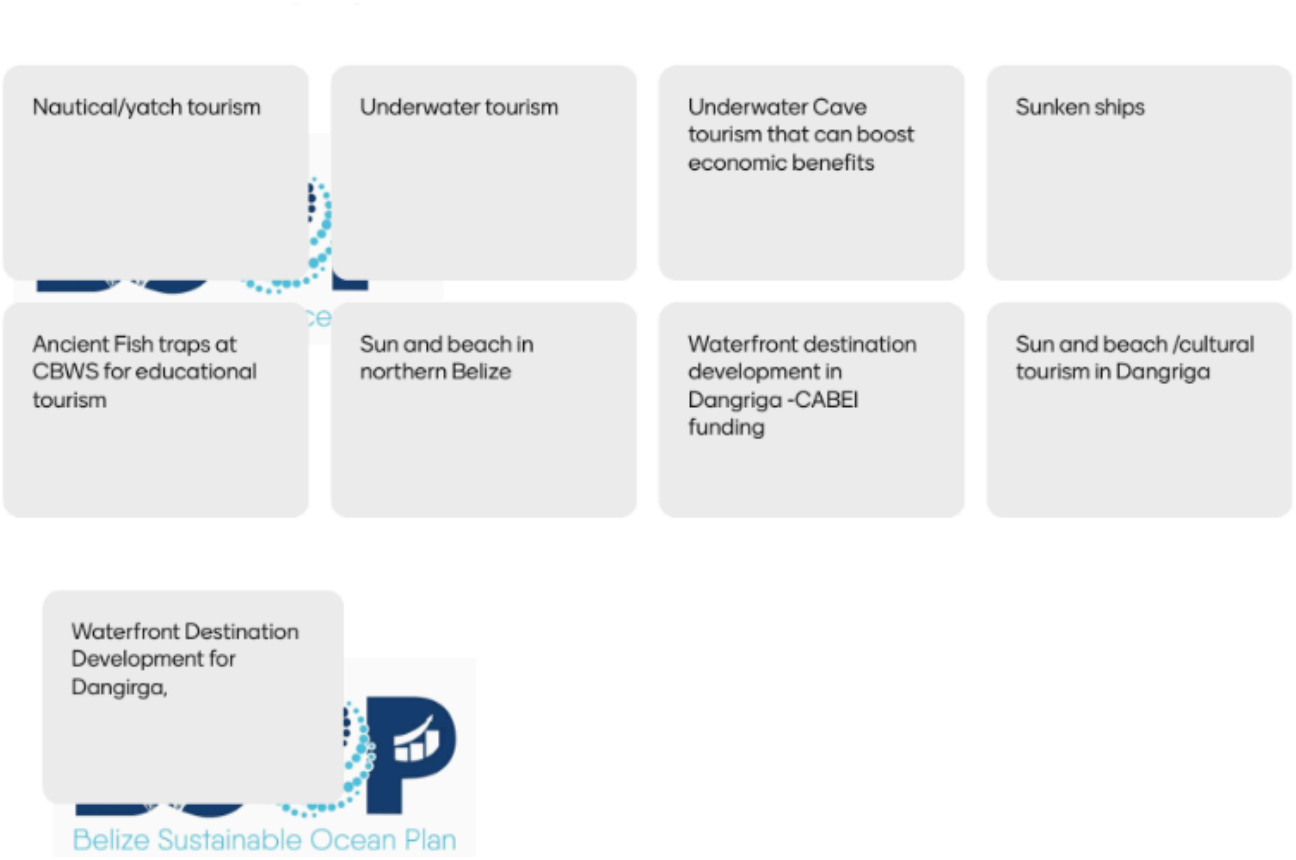


Figure 11 Emerging Marine Uses Identified for the Tourism Sector

Maritime Administration

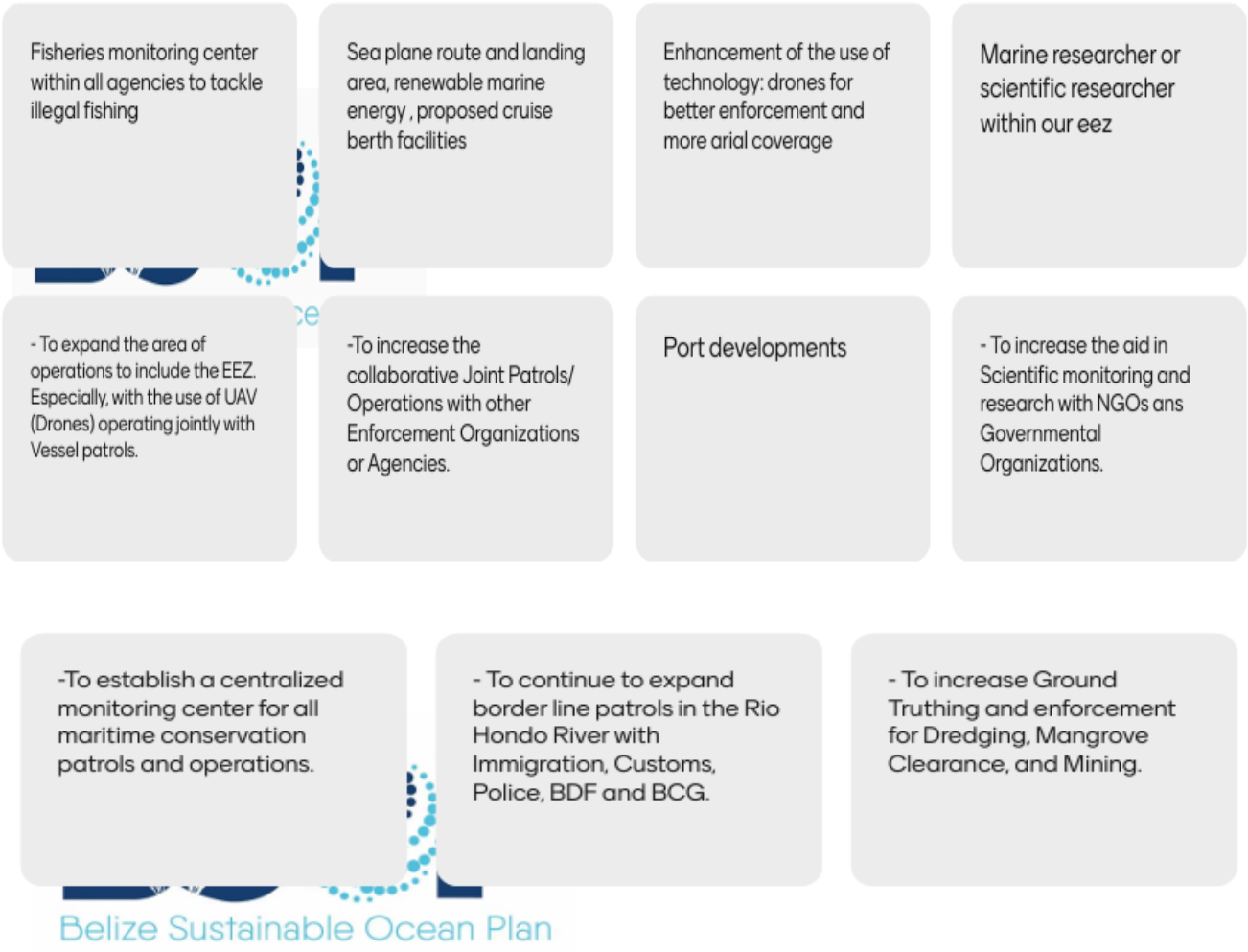


Figure 12 Emerging Marine Uses Identified for the Maritime Administration Sector

Marine and Coastal Development

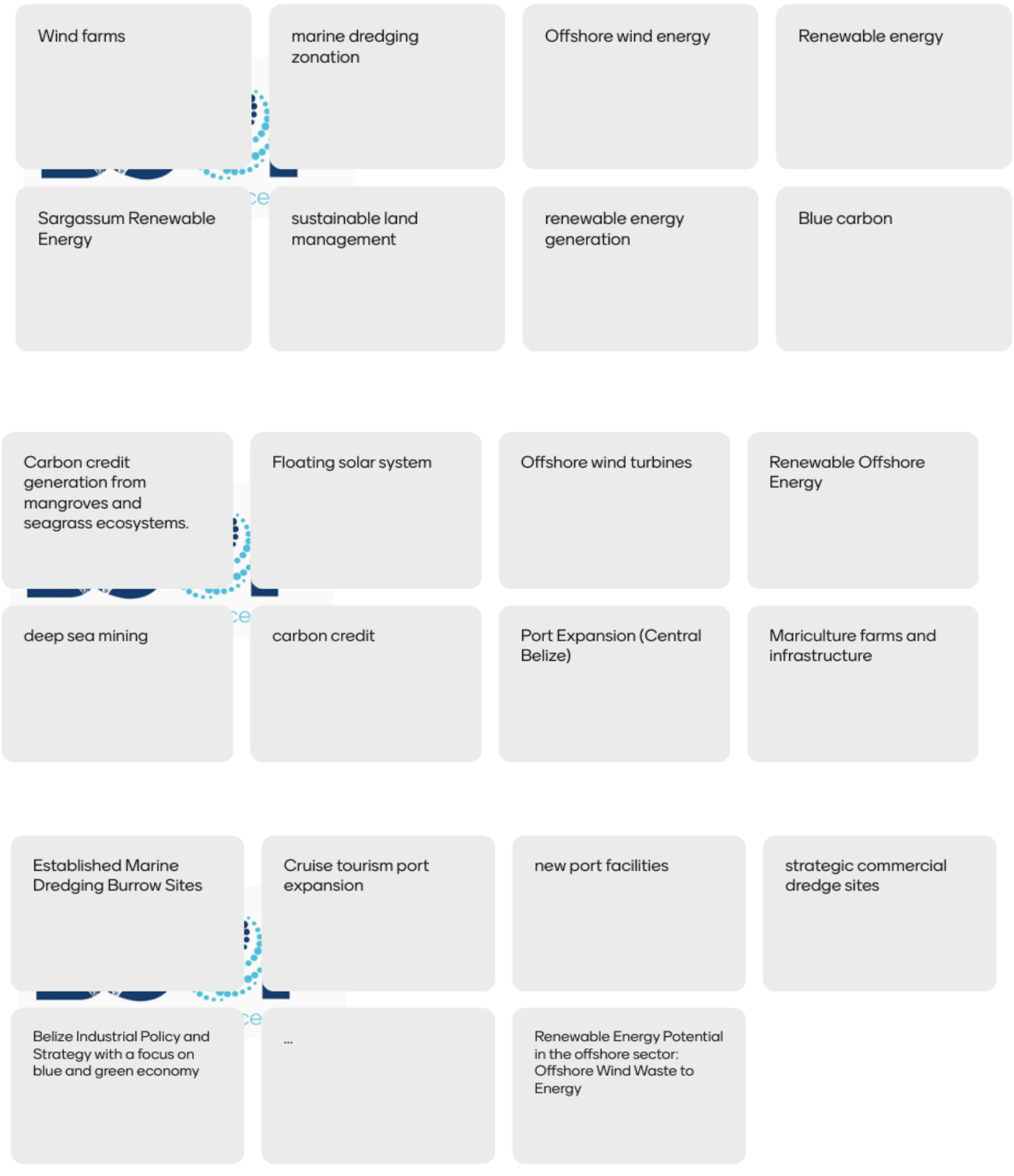


Figure 13 Emerging Marine Uses Identified for the Marine and Coastal Development Sector

Marine and Coastal Ecosystems

Figure 14 Emerging Marine Uses Identified for the Marine and Coastal Ecosystems Sector

Part 2: Rating of the Potential for the Emerging Uses

Figure 15 QR Codes Used to Rate Emerging Uses by Sector

Fisheries - Potential for Emerging Use

Figure 16 Potential for Emerging Uses Identified for the Fisheries Sector

Tourism - Potential for Emerging Use

Figure 17 Potential for Emerging Uses Identified for the Tourism Sector

Maritime Administration - Potential for Emerging Use

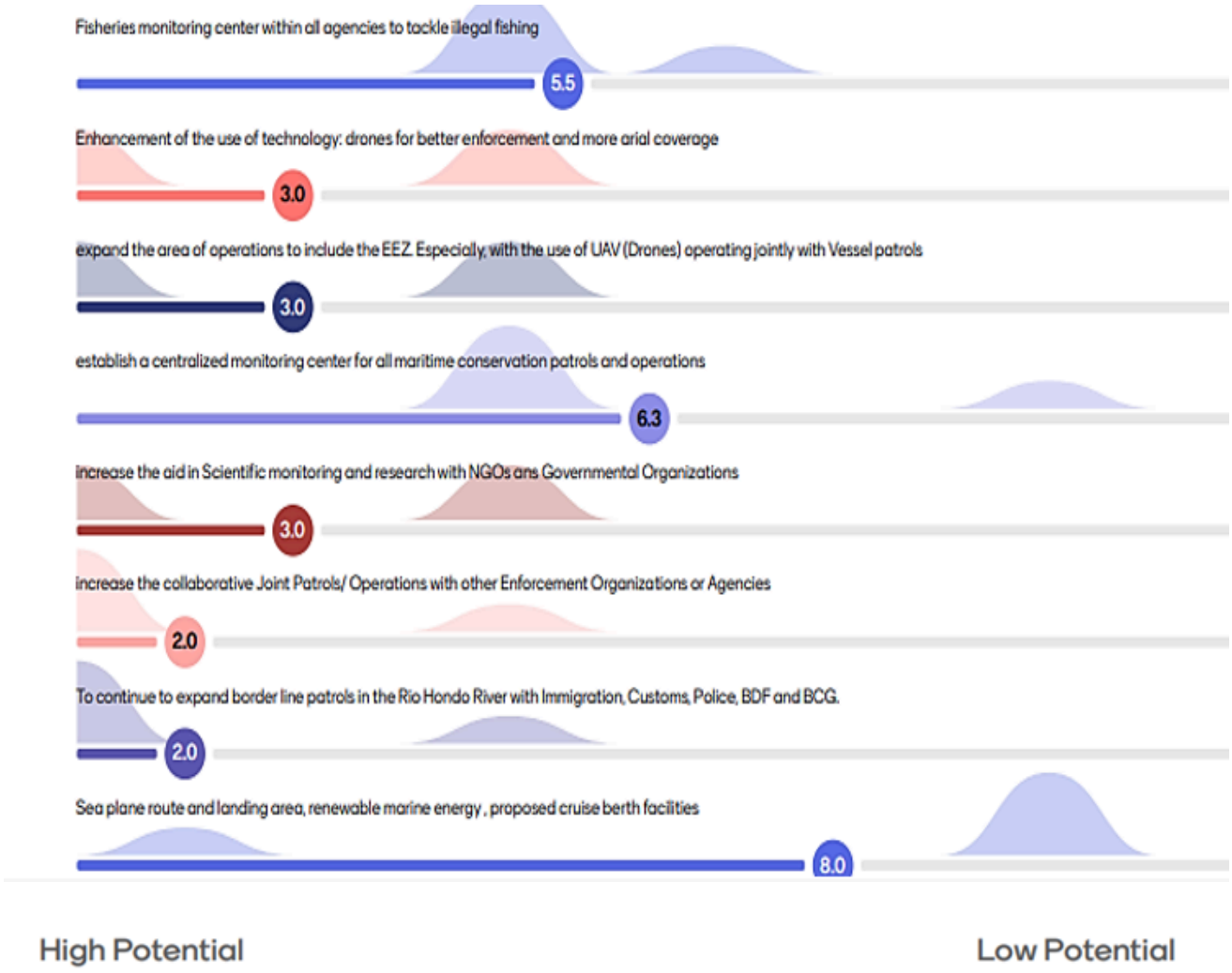


Figure 18 Potential for Emerging Uses Identified for Maritime Administration Sector

Maritime & Coastal Development- Potential for Emerging Use

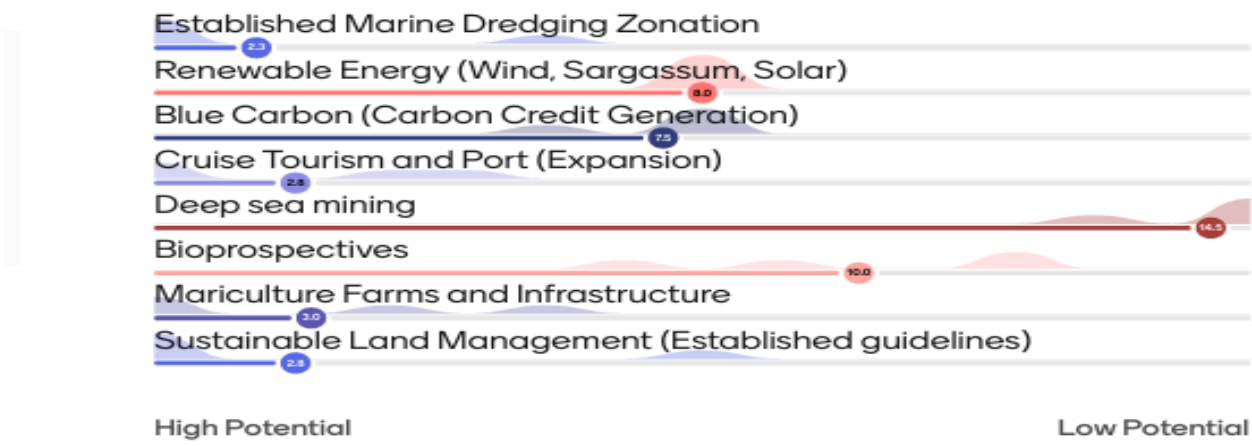


Figure 19 Potential for Emerging Uses Identified for the Maritime & Coastal Development Sector

Marine & Coastal Ecosystems - Potential for Emerging Use

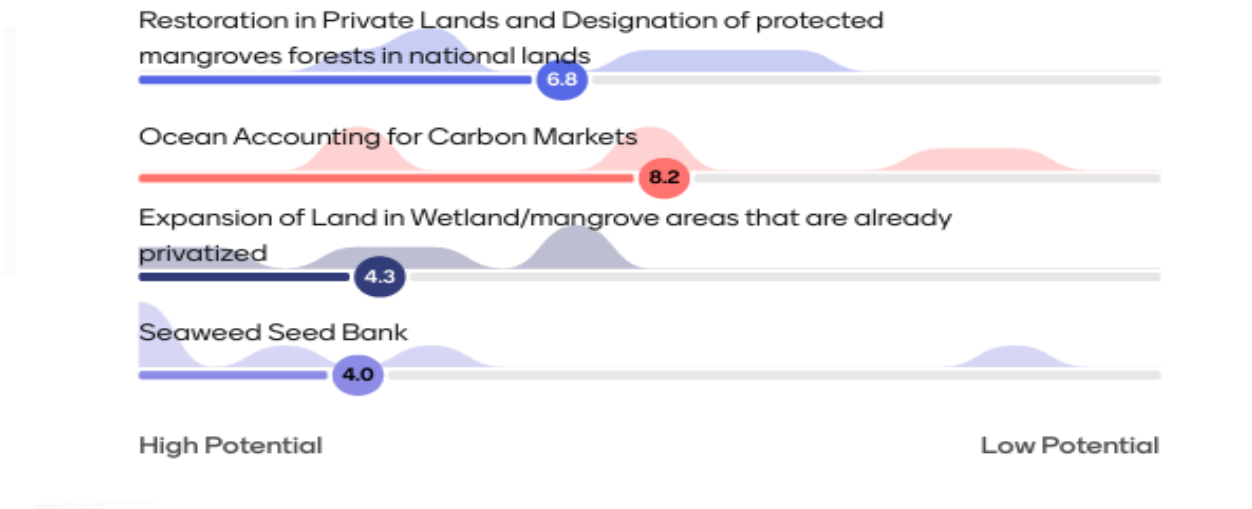


Figure 20 Potential for Emerging Uses Identified for the Marine & Coastal Ecosystems Sector

Part 3: Compatibility Matrix of Emerging Uses

Instructions:

- Incorporate the identified emerging uses into the compatibility matrix and assess the compatibility of the emerging uses against existing use.
- Report back on any incompatible uses.

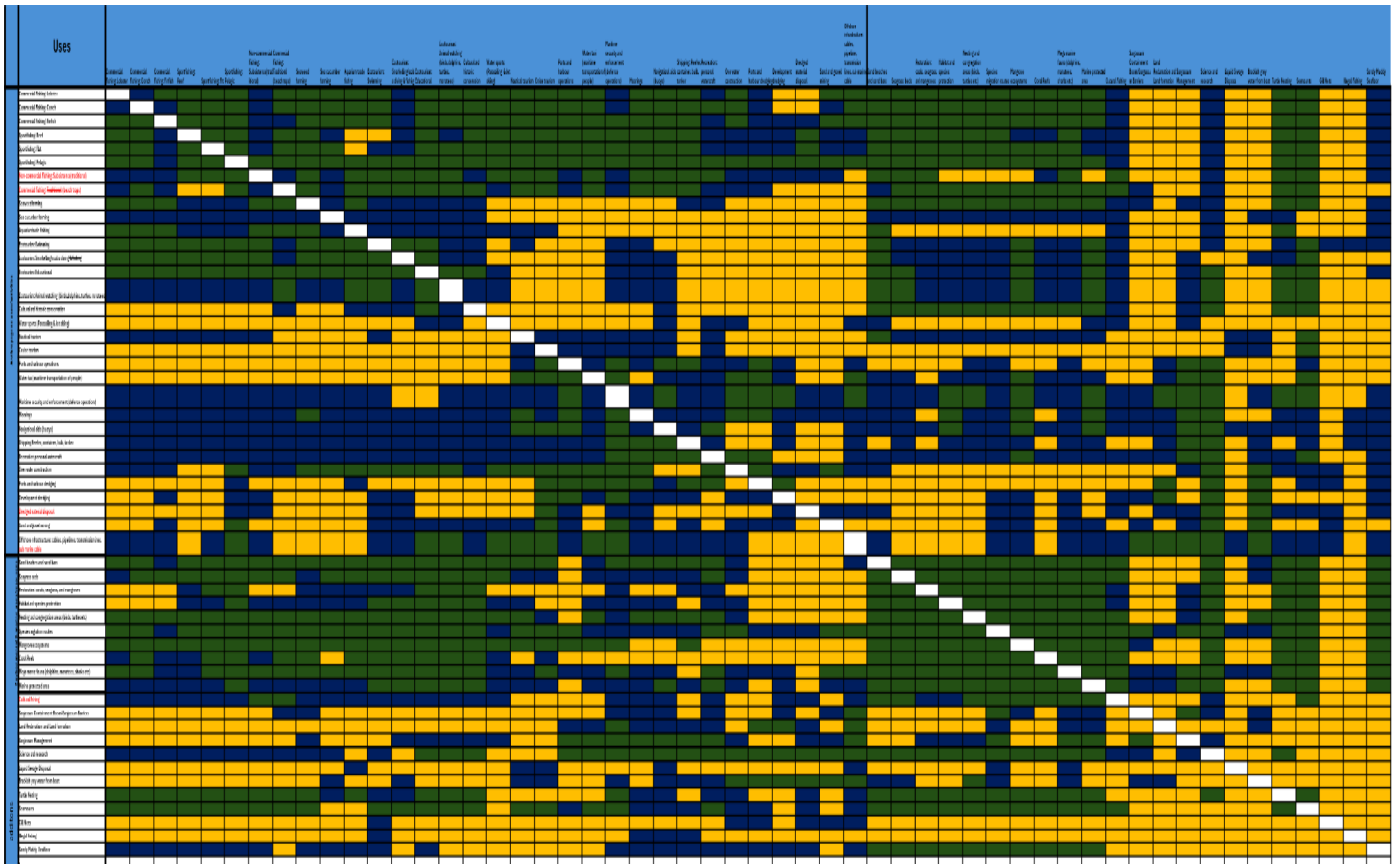


Figure 21 Integration of Emerging Uses into the Compatibility Matrix

Following identification of emerging uses, participants used the **Compatibility Matrix** to assess how these potential activities might interact with existing marine uses and ecosystem values.

Several potential incompatibilities and conflicts were highlighted.

Highlights from Sector Report-Back

Fisheries

Emerging activities such as coastal infrastructure development, mariculture facilities, and marine tourism infrastructure were identified as potentially conflicting with:

- Lobster and conch fisheries
- Finfish fishing areas
- Reef-associated fisheries

Participants noted that infrastructure associated with landing sites, aquaculture facilities, or tourism development could interfere with fishing grounds and important habitat areas.

Tourism

New tourism uses such as underwater tourism, cave tourism, and nautical tourism were discussed. Potential conflicts were identified with:

- Recreational swimming and snorkeling areas
- Marine wildlife habitats
- Fishing activities

Participants also emphasized that tourism infrastructure must be carefully located to avoid conflicts with environmentally sensitive areas.

Marine and Coastal Development

Marine and coastal development activities were identified as having significant compatibility challenges with ecosystem protection. Participants highlighted potential incompatibilities with:

- Sensitive marine habitats
- Protected areas
- Coral reefs and seagrass beds

In particular, large-scale infrastructure or coastal expansion could result in habitat degradation if not properly regulated.

Maritime Administration

New maritime infrastructure such as seaplane routes and landing zones was identified as an emerging use. Participants noted that these activities may create conflicts with:

- Protected marine areas
- Waste disposal and pollution management concerns
- Coastal tourism facilities

Careful spatial planning would therefore be required to ensure safe and environmentally responsible operations.

Marine & Ecosystems

The ecosystems group highlighted emerging activities that could affect sensitive habitats, including:

- Expansion of seaweed farming
- Mariculture development
- Wetland modification or expansion

Participants noted that these activities could conflict with:

- Critical habitats for marine species
- Fish nursery areas
- Habitat protection objectives

Protecting habitat areas while enabling sustainable economic activities was identified as a key planning challenge.

Key Observations

During the plenary discussion, groups emphasized that many emerging activities present both opportunities and risks. Several cross-cutting observations emerged:

- Emerging industries such as mariculture and seaweed farming could support economic diversification but must be carefully sited to avoid ecological damage.
- Tourism expansion, particularly new forms such as underwater or nautical tourism, must be managed to prevent conflicts with fisheries and sensitive habitats.

- Coastal and marine infrastructure development requires strong regulation to prevent impacts on protected ecosystems.
- Improved spatial planning and enforcement mechanisms will be necessary to manage emerging ocean uses effectively.

Participants noted that incorporating emerging uses into the Compatibility Matrix helps identify potential conflicts early in the planning process and supports more informed decision-making within Belize's marine spatial planning framework.

Day 2 – Session 3

Presentation: ***Future Scenario Development***

Presenter: ***Samir Rosado, CZMAI***

Following the Emerging Uses exercise, the workshop transitioned into the Scenario Development session, facilitated by Samir Rosado of the Coastal Zone Management Authority and Institute (CZMAI). This segment marked a key step in the future planning phase of the Belize Sustainable Ocean Plan (BSOP), as participants were invited to examine how Belize's marine space could evolve under different future conditions and to assess how spatial planning decisions may need to adapt accordingly.

Mr. Rosado introduced the session by explaining that scenario development is an important planning tool used in marine spatial planning to help stakeholders anticipate uncertainty and explore possible future outcomes. Rather than predicting a single future, the exercise allows planners and stakeholders to consider multiple plausible conditions that could shape how Belize's ocean space is used and managed over time. Participants were reminded that the scenarios being discussed were initially developed during the first Marine Spatial Planning workshop and were now being revisited for validation and refinement.

The scenarios presented to participants were structured around two key drivers that could significantly influence future marine spatial planning decisions: governance conditions and climate change impacts. By examining combinations of strong or weak governance

alongside varying levels of climate change pressure, the scenarios provided a framework through which stakeholders could explore how different policy, environmental, and management contexts might influence ocean use, spatial conflicts, and conservation priorities.

During the session, participants engaged in facilitated discussion to assess whether the proposed scenarios accurately reflected plausible future conditions for Belize's marine environment. Stakeholders were invited to provide feedback on the assumptions underlying each scenario and to consider whether additional factors or adjustments should be incorporated. This process helped ensure that the scenarios were grounded in both technical understanding and sector experience.

Participants were encouraged to reflect on how different future conditions might influence the demand for marine space, the compatibility of ocean uses, and the potential need for changes to zoning arrangements or management strategies. In particular, discussions focused on identifying areas where future pressures could intensify, where sector interests may compete for space, and where proactive planning could help reduce potential conflicts while supporting sustainable economic activity and biodiversity protection.

The session also reinforced the connection between scenario development and the broader objectives of the Belize Sustainable Ocean Plan. By validating these scenarios, stakeholders contributed to establishing a shared understanding of the possible future contexts within which the Marine Spatial Plan will operate. These scenarios will serve as a guiding framework for subsequent spatial planning exercises, including the evaluation of zoning configurations and the identification of areas requiring further technical analysis.

Overall, the Scenario Development session strengthened the forward-looking dimension of the workshop by encouraging participants to think strategically about uncertainty, environmental change, and governance dynamics. The exercise helped prepare stakeholders for the next stages of the planning process, where validated scenarios will inform spatial decision-making and the continued refinement of Belize's Marine Spatial Plan.

Day 2 – Activity 3

Activity 3: **Future Scenario Development**

Presenter: **Samir Rosado, CZMAI**

Following the presentation, participants were asked to review the spatial datasets for their respective sectors. Each table received printed maps representing spatial data for their sector (which were used in the compatibility matrix activity on Day One), along with access to the SeaSketch platform to view the data digitally.

Participants were instructed to:

1. Review the spatial maps provided for their sector, including the locations of activities identified through the Ocean Use Survey.
2. Assess whether the mapped information accurately represents the activities occurring within their sector.
3. Identify missing information, incorrect locations, or additional activities that should be included in the spatial dataset.
4. Document their observations and recommendations on the facilitator's notes or directly on the printed maps.
5. Discuss potential future activities or emerging uses that may need to be considered in future spatial planning analyses.
6. Share key observations during a short report-back session, where each table summarized their findings for the plenary group.

The objective of the exercise was to validate and refine the spatial datasets, ensuring that the information used for Marine Spatial Planning reflects the knowledge and experience of sector stakeholders.

Highlights from Sector Report-Back

Following the map review exercise, representatives from each sector provided feedback on the spatial datasets presented. Participants highlighted gaps in the data, suggested additional locations or activities to include, and identified areas where further verification or data collection may be required.

Fisheries

The fisheries group noted several areas where additional spatial information should be incorporated into the dataset. Participants confirmed that some locations identified for aquarium fish collection appear consistent with known fishing areas, although there was uncertainty about whether all sites were renewable or actively used.

The group also highlighted the presence of aquaculture activities in several areas that were not clearly represented in the existing maps. Specific references were made to locations near northern Belize and other coastal areas where aquaculture operations are known to occur. Participants also suggested the inclusion of oyster harvesting areas located between coastal communities and marine reserves.

In addition, participants noted the potential for future seaweed farming and mariculture development, although precise locations for these activities have not yet been formally identified. The group further recommended including additional landing sites such as those in Placencia and Corozal to better reflect current fisheries operations and future planning needs.

Marine and Coastal Ecosystems

Participants representing marine and coastal ecosystems reviewed the restoration data presented and identified several additional sites where restoration activities are currently underway. They noted that coral restoration efforts conducted by organizations such as Fragments of Hope were not fully represented on the map.

The group recommended integrating additional spatial datasets, including shapefiles from the upcoming national restoration planning project, which is expected to identify priority restoration areas across Belize. Incorporating this information into the spatial planning platform would provide a more comprehensive view of restoration activities and potential restoration zones.

Maritime Administration

The maritime administration group identified several gaps related to transportation routes, enforcement coverage, and port infrastructure.

Participants highlighted that certain maritime transport routes, particularly those connecting coastal communities were not adequately represented on the maps. They

recommended including routes used for the transportation of goods and services between coastal settlements.

The group also noted that maritime security and enforcement coverage extends across Belize's territorial waters and is expected to expand further offshore in the future. They emphasized the importance of capturing these operational areas within the dataset.

Additionally, participants pointed out that some designated ports and harbor locations such as San Pedro and Big Creek were missing from the spatial layers and should be added to improve the accuracy of the maritime administration dataset.

Cultural Heritage and Tourism Sector

Participants from the cultural heritage and tourism group identified several areas with potential for tourism and research related to archaeological and cultural heritage resources.

The group highlighted locations near San Juan and other coastal and island sites where Maya cultural remains and archaeological features have been documented. Some of these sites are already used for tourism or educational activities, while others have not yet been fully researched.

Participants emphasized that although cultural remains may exist along many parts of Belize's coastline, only certain locations currently demonstrate clear potential for tourism development or educational activities.

The group also noted opportunities for expanding nautical tourism activities in southern coastal areas such as Placencia and Punta Gorda.

Marine and Coastal Development

Participants reviewing coastal and marine development data focused primarily on issues related to terminology and data classification.

The group observed that some categories such as residential development and commercial development were not clearly distinguished within the dataset. They recommended revisiting the definitions used for these categories and potentially introducing subcategories to improve clarity.

Participants also suggested aligning the terminology used in the spatial datasets with the terminology used in the compatibility matrix exercise conducted earlier in the workshop. This alignment would help ensure consistency across different components of the MSP process.

Finally, the group highlighted the need to include additional datasets related to offshore energy potential and other emerging development activities that may become relevant in future planning discussions.

Key Cross-Sector Observations from the Spatial Data Review

Several common themes emerged across sector discussions during the spatial data validation exercise. These observations provide important insights for improving the spatial datasets that will inform the Marine Spatial Planning (MSP) process.

1. Need for Additional Spatial Data

Across multiple sectors, participants noted that some activities currently occurring within Belize's marine space were not fully captured in the existing dataset. Stakeholders identified additional locations for activities such as aquaculture, coral restoration, maritime transport routes, and fisheries landing sites. These contributions highlighted the importance of incorporating sector knowledge to improve the completeness and accuracy of spatial data used in the MSP process.

2. Importance of Integrating Existing National Datasets

Participants emphasized the need to integrate spatial datasets from ongoing or completed national initiatives. In particular, restoration planning data, maritime enforcement coverage, and port infrastructure information were identified as important datasets that could strengthen the spatial analysis. Integrating these datasets into the SeaSketch platform would provide a more comprehensive representation of marine activities and management priorities.

3. Clarification and Consistency of Terminology

Several groups noted that some categories used within the spatial datasets require clearer definitions. In particular, participants observed that certain

classifications—such as residential versus commercial coastal development—were not always clearly distinguished. Stakeholders recommended aligning the terminology used in spatial mapping with the terminology used in the compatibility matrix exercise to ensure consistency across the MSP analytical process.

4. Consideration of Future Activities and Emerging Uses

While the Ocean Use Survey primarily captured current activities, participants highlighted the importance of considering future and emerging uses within the MSP process. Examples discussed included potential expansion of mariculture, offshore energy exploration, restoration initiatives, and evolving maritime security operations. Incorporating future development trends will help ensure that the MSP framework remains forward-looking and adaptable to changing ocean uses.

5. Value of Participatory Data Validation

Participants acknowledged that the exercise demonstrated the value of participatory validation of spatial data. By reviewing the datasets collectively, stakeholders were able to identify gaps, confirm known activity areas, and provide additional local knowledge that may not have been captured during the original Ocean Use Survey. This collaborative validation process strengthens confidence in the spatial datasets that will support subsequent MSP analyses.

Day 2 – Session 4

Presentation: **Future proofing the Goals & Objective of MSP plan**

Presenter: ***Janel McNab, CZMAI***

The final technical session of Day 2 focused on future-proofing the goals and objectives of the Marine Spatial Planning (MSP) Plan, and was facilitated by Janel McNab of the Coastal Zone Management Authority and Institute (CZMAI). The purpose of the session was to

review and refine the existing goals and objectives guiding the Belize Sustainable Ocean Plan (BSOP) to ensure that they remain relevant, forward-looking, and aligned with the future planning phase of the Marine Spatial Planning process.

Ms. McNab began the session by reminding participants of the established BSOP vision statement, which describes a healthy, resilient, and equitable shared ocean that supports a thriving national economy while sustaining Belize's culture and the well-being of its people. She explained that while the existing goals and objectives had originally been developed to guide the planning process, the workshop now represented an important transition toward implementation. As such, the exercise aimed to ensure that the goals and objectives moving forward reflect the long-term outcomes the plan intends to achieve rather than solely the steps required to develop the plan.

Participants were reminded that the Marine Spatial Planning framework is organized around four core pillars: process governance, marine conservation, blue economy, and equity. These pillars served as the basis for the activity, with each group assigned one pillar to review and refine. Ms. McNab provided guidance on the distinctions between the key planning components, explaining that the vision represents the long-term future the plan seeks to achieve, goals describe the broad outcomes that support that vision, objectives define more specific directions for achieving those goals, and actions represent the practical steps required for implementation.

To support participants in refining the plan's goals and objectives, Ms. McNab outlined several principles for developing strong planning statements. Goals were described as long-term, outcome-focused statements that should remain broad enough to guide multiple sectors while still reflecting Belize's national context and priorities. Objectives, in contrast, were expected to be more specific and measurable, aligning with the **SMART framework**, that is: objectives should be specific, measurable, achievable, relevant, and time-bound. Participants were encouraged to ensure that proposed objectives include clear indicators or timelines where possible, allowing progress to be monitored and evaluated over time.

The activity that followed invited participants to work in their assigned groups to review pre-drafted goals and objectives associated with each pillar. Participants were asked to refine the language of the goals, propose two to three supporting objectives, and identify measurable indicators of success that could be used to track progress under the Marine Spatial Plan. The facilitator emphasized that the exercise was intended to generate draft inputs rather than final decisions, noting that the outputs would be further refined and

circulated for additional validation before being incorporated into the final BSOP documentation.

During the report-back segment, each group presented the refinements they had proposed. The Equity group revised its goal to emphasize inclusive and equitable management of ocean space and marine resources for all users, ensuring that the wording reflected fairness while avoiding language that could unintentionally exclude certain stakeholders. The Blue Economy group focused on strengthening the goal related to sustainable economic development, proposing language that promotes responsible coastal and marine development while ensuring compatibility with ecosystem health, community livelihoods, and long-term national prosperity.

The Process Governance group discussed the importance of maintaining effective, transparent governance systems capable of supporting coordination, enforcement, and accountability within the Marine Spatial Planning framework. Meanwhile, the Marine Conservation group refined its goal to emphasize maintaining and restoring a healthy, resilient, and biodiverse coastal and marine environment capable of sustaining ecosystem services while supporting economic development and broader societal benefits.

Following the presentations, facilitators acknowledged the value of stakeholder input and reiterated that the revised goals and objectives developed during the session would serve as draft contributions to the continued refinement of the Marine Spatial Planning framework. Participants were informed that the outputs would be reviewed and further developed by the planning team before being circulated again for validation as the BSOP moves closer to finalization.

Overall, the session provided an opportunity for stakeholders to actively contribute to shaping the strategic direction of the Belize Sustainable Ocean Plan. By refining the plan's guiding goals and objectives through a collaborative process, participants helped ensure that the Marine Spatial Plan reflects shared priorities related to governance, conservation, economic development, and equitable access to Belize's marine resources.

Day 2 – Activity 4

Activity 4: ***Future-Proofing the Goals & Objectives of the MSP Plan***

Participants were informed that the purpose of the activity was not to develop entirely new policy goals, but rather to review and refine drafted goals, objectives, and indicators associated with the Belize Sustainable Ocean Plan (BSOP) framework.

Participants were organized into working groups, with each table assigned one of the four BSOP Goal Pillars:

- Process Governance
- Equity
- Marine Conservation
- Blue Economy

Each group was provided with draft goal statements and supporting objectives related to their assigned pillar. Participants were asked to review these elements and collaboratively propose refinements based on their sector expertise and perspectives.

Report-Back Highlights

Process Governance

BSOP Goals & Objectives - Worksheet Summary	
Pillar	Process Governance
Goal Statement	Belize sustainable ocean plan promotes and maintains an effective, transparent and enforceable framework for coordinated ocean management and decision-making.
Flexible Objective	To reduce conflicts among users through coordinated inter-agency and compliance mechanisms.

SMART Objective	1. By XXXX, coordinate the existing agencies responsible for implementation of the BSOP and data sharing for transparent decision-making. 2. By XXXX, implement a monitoring and evaluation plan and plan review cycles that evaluate the efficacy of the BSOP for adaptive ocean resource management.
Additional Objective	None
Indicator of Success	None

Equity

BSOP Goals & Objectives - Worksheet Summary	
Pillar	Equity
Goal Statement	Ensure that the ocean space and marine resources are managed inclusively, fairly, and equitably for all users of the space.
Flexible Objective	1. To actively engage stakeholder groups throughout the MSP process 2. To build a traditional stewardship of empowerment and marine resources

SMART Objective	None
Additional Objective	None
Indicator of Success	None

Marine Conservation

BSOP Goals & Objectives - Worksheet Summary	
Pillar	Marine Conservation
Goal Statement	Maintain and restore a healthy, resilient, and biodiverse coastal marine environment that sustains ecosystem services and blue economy development for present and future generations.
Flexible Objective	To improve marine biodiversity and ecosystem health through improved management effectively within the 30% ocean space under protection.
SMART Objective	To safeguard critical habitats such as coral reefs, mangroves, seagrass beds, and spawning areas, especially those within world heritage sites.

Additional Objective	Reduce cumulative impacts from climate change, disasters, development, and ocean use through ecosystem-based zoning management.
Indicator of Success	1. Worldwide heritage site indicators : OUV, SOC 2. _% improved : critical habitats, ecosystem health, biodiversity etc.

Blue Economy

BSOP Goals & Objectives - Worksheet Summary	
Pillar	Blue Economy
Goal Statement	1. Optimize blue space to balance economic opportunities with the needs of future generations. 2. The blue economy ensures efficiency and optimization of the blue space for a better life for current vulnerable communities and future generations to come
Flexible Objective	1. By __, install navigational aids for all shipping/Transportation routes and protective areas. 2. Emerging uses that implement economic growth
SMART Objective	None

Additional Objective	None
Indicator of Success	None

Day 3 – Session 1

Presentation 4**: MPA Design Criteria and Zoning Framework**

Presenter: *Samir Rosado, CZMAI*

Mr. Samir Rosado delivered a presentation providing an overview of the zoning framework and Marine Protected Area (MPA) design criteria developed by Dr. Rogers, who served as a consultant on the project. The session aimed to familiarize participants with the framework and demonstrate how it can support the development and implementation of marine spatial planning decisions.

Mr. Rosado explained that the zoning framework functions as a structured system of policy instruments and rules used to allocate and regulate human activities across marine spaces. The framework helps clarify the intended purpose of each zone and identifies which activities are permitted, restricted, or require regulation within those areas. For example, if a zone is designated primarily for fishing, the framework outlines which activities are compatible with fishing, which activities may create conflicts, and which uses may be allowed under certain regulatory conditions.

He emphasized that understanding the compatibility of activities within different zones is critical for effective planning. Activities classified as moderately compatible may coexist within the same area but require appropriate regulatory controls to minimize potential conflicts. This approach reinforces the importance of the compatibility matrix exercise

conducted during the workshop, as the matrix helps inform decisions about which activities can occur together within specific zones.

Mr. Rosado noted that the zoning framework developed by Dr. Rogers was comprehensive and built upon the compatibility matrix previously developed through stakeholder consultation. The consultant examined various types of marine use zones and outlined their primary objectives, as well as the activities typically associated with each zone. The framework includes a wide range of zoning categories such as Marine Protected Areas, fishing zones, maritime security and operational zones, military facilities and live firing ranges, maritime areas, aquaculture zones, seabed mineral and pipeline zones, port and navigational areas, marine archaeological sites, tourism and recreation zones, multiple-use zones, mariculture allocation zones, and sport fishing zones.

He highlighted that the framework also recognizes that zoning extends beyond Marine Protected Areas, acknowledging that important activities such as tourism, recreation, and fisheries occur in areas outside of protected zones and must also be considered in the broader marine spatial planning process.

Mr. Rosado concluded by noting that Dr. Rogers' work provides a strong foundational resource for guiding the development of the marine spatial plan. Participants were encouraged to review the detailed documentation, which outlines the zoning categories and associated management considerations. Given the length of the document, it was noted that summary materials were being developed to make the information more accessible for stakeholders involved in the planning process.

Day 3 – Activity 1

Activity 1**: Prioritization of MPA Design Criteria and Development of SMART Targets**

Presenter**: *Samir Rosado, CZMAI***

Participants engaged in a two-part activity designed to prioritize recommended Marine Protected Area (MPA) design criteria and develop measurable targets to guide implementation.

Activity 1A : Ranking Recommended Design Criteria

Participants were first asked to review the list of proposed Marine Protected Area (MPA) design criteria. Using the Mentimeter interactive polling platform, participants ranked the criteria based on their perceived level of importance for the effective design and management of the MPA network.

This process allowed participants to collectively identify which criteria should be prioritized in guiding future marine spatial planning and conservation efforts. The results of the polling exercise were used to determine the four highest-ranked design criteria, which were carried forward into the next activity.

Figure 22 Mentimeter QR Code

Results:

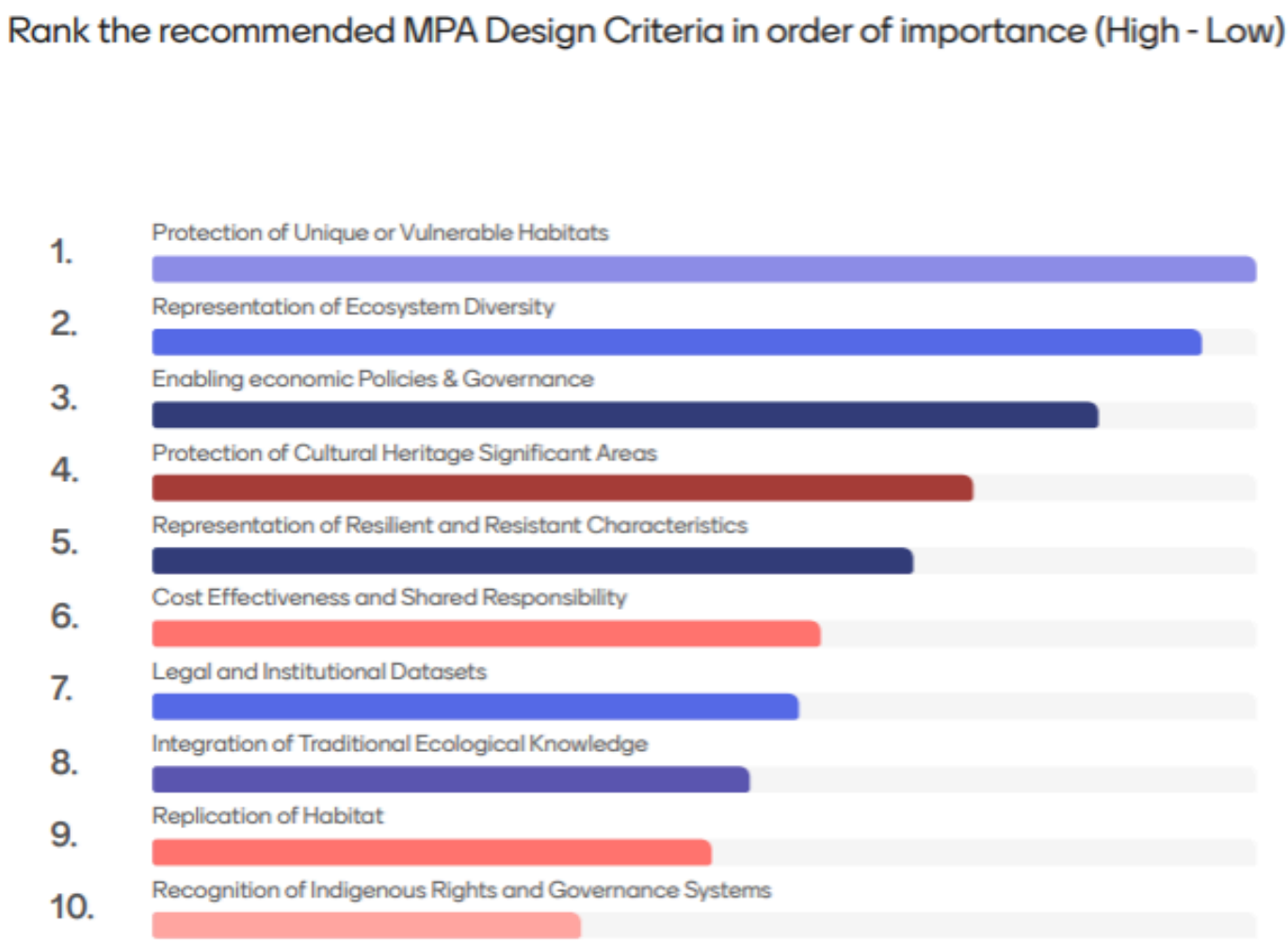


Figure 23 Mentimeter Results of MPA Design Criteria

Activity 1B: Development of SMART Targets for Priority Criteria

Following the ranking exercise, participants were organized into working groups and asked to focus on the four highest-ranked criteria identified in Activity 1A.

Each group was tasked with developing **SMART targets** (Specific, Measurable, Achievable, Relevant, and Time-bound) for the selected criteria. Participants were encouraged to ensure that the targets clearly articulated the intended conservation outcome and included measurable elements that would allow progress to be monitored over time.

To guide the exercise, an example was provided. For the criterion "Representativeness of habitats," a possible SMART target could be stated as:

Protect and monitor at least 90% of the mapped occurrences of coral reef habitats within the reserve network by 2030, ensuring that each major reef habitat type (e.g., fringing and barrier reefs) is represented in at least one designated management zone.

The outputs of this activity contributed to refining the MPA design criteria and identifying measurable targets that can support implementation and monitoring of the MPA network under the BSOP.

The results of this exercise were subsequently used to inform discussions on the application of design criteria in the spatial planning process and the development of management strategies for the proposed MPA network.

Report-Back Highlights

Team 1 – Enabling Economic Policies and Governance

Team 1 discussed how future scenarios could influence zoning decisions through the lens of economic policy and governance arrangements for Marine Protected Areas (MPAs). The group emphasized that effective zoning must be supported by strong financial and governance mechanisms that ensure MPAs are sustainably funded and managed.

Participants proposed that a baseline assessment or audit of all financial investments and revenue streams associated with MPAs should be conducted in order to understand the current financial status of protected areas. This assessment would help identify funding gaps and opportunities to strengthen financial sustainability across the MPA network.

Building on this foundation, the group suggested that management plans and contribution planning agreements should be aligned with national frameworks to ensure that a portion of the revenue generated from MPA-related activities is reinvested directly into site-level management. As part of this approach, the group proposed that a minimum of 30 percent of revenue generated within MPA zones be reinvested into the management of those sites by 2029.

Participants also highlighted the importance of ensuring that communities located near MPAs benefit from the economic activities generated within these areas. The group recommended that revenue-sharing or reinvestment mechanisms be designed to support

surrounding communities and promote local participation in MPA management and conservation efforts.

Team 2 – Representation of Ecosystem Diversity : Biodiversity and Habitat Diversity

This group focused on ensuring that the zoning framework adequately represents Belize's biodiversity and habitat diversity. Participants noted that deeper marine habitats (greater than two meters) are currently underrepresented within existing protection measures and should receive greater consideration in future zoning decisions. The group emphasized that protection strategies should consider both seafloor habitats and the water column, as migratory species and pelagic ecosystems rely on open-water habitats that may not be captured by seabed-focused criteria alone.

Participants also highlighted the ecological importance of back reef rubble and sandy habitats, which serve as nursery areas for coral recruitment and juvenile fish species. These habitats also support tourism activities such as flats and fly fishing. The group recommended that these habitat types be considered in biodiversity representation targets and that future planning also consider areas with potential commercial and ecological importance, such as natural seaweed banks, which may support future mariculture development.

Team 3 – Identification and Protection of Vulnerable Ecosystems

This group examined vulnerable marine ecosystems and areas that may require additional protection under the zoning framework. Participants identified several key ecosystems and habitat types that should be prioritized for conservation, including spawning aggregation sites, nursery habitats, seagrass beds, coral reefs, mangroves, and estuarine ecosystems.

The group emphasized the ecological importance of spawning aggregation sites, recommending full protection due to their critical role in sustaining fish populations. Mangrove ecosystems were also highlighted as essential coastal habitats that support fisheries, shoreline stabilization, and biodiversity, and participants suggested stronger enforcement of existing protections for these habitats.

Additional vulnerable features discussed included underwater caves, blue holes, seamounts, and geological formations, which were recognized for their ecological and scientific value. Participants also noted the importance of protecting migratory routes for large marine species, nesting beaches for turtles and birds, and unique features such as cenotes and stromatolites. While several protection targets were proposed, participants emphasized the

need for improved baseline data to determine appropriate conservation thresholds for ecosystems such as coral reefs and seagrass beds.

Team 4 – Protection of Cultural Heritage Sites

Team 4 focused on the protection of marine cultural heritage resources, including historic shipwrecks, submerged settlements, cemeteries, and prehistoric archaeological sites. Participants highlighted the need for improved mapping and documentation of these sites to support zoning decisions.

The group noted that LiDAR mapping has been conducted in northern Belize, but similar data is lacking for southern marine areas. Participants recommended expanding data collection efforts and validating known sites through field surveys. According to available literature, approximately 63 shipwrecks are documented in Belizean waters, although only a small number have been fully verified and mapped.

Participants also identified submerged prehistoric sites and underwater caves as important heritage resources requiring further study and protection. The group recommended establishing protective buffer zones of approximately 500 meters around identified cultural heritage sites to safeguard artifacts and associated debris. Where sites fall outside existing high-protection zones within Marine Protected Areas, participants suggested that special management measures be implemented to prevent disturbance from recreational activities such as diving.

At the close of the design criteria exercise, Mr. Rosado noted that the workshop team would use the outputs from the group discussions to refine the zoning and design criteria. He indicated that a revised version would be circulated for participant review and sign-off. Participants were then introduced to the final exercise of the day, which focused on applying future scenarios to sector zoning.

Following the zoning criteria exercise, participants returned to their sector groups and were asked to apply one of the predefined future scenarios to their sector. The purpose of this activity was to explore how marine and coastal zones, sector priorities, and management needs might change under different combinations of governance quality and climate change impacts.

Mr. Rosado explained that while the original intention had been for each sector to examine all four scenarios, time constraints required the exercise to be simplified so that each sector

considered only one scenario. Participants were then asked to reflect on how the areas relevant to their sector might change in response to the assigned future condition.

Day 3 – Activity 2

Activity 2**: Assessing the Impact of Future Scenarios on Sector Zonation**

Presenter**: *Samir Rosado, CZMAI***

Following the recap, participants were asked to reflect on the scenario framework and discuss the following question within their sector groups:

"How did the future scenario affect the Zonation for your sector?"

Participants worked within their assigned sector groups to examine how the selected scenario could influence spatial planning decisions, including the location, size, or management approach of zones relevant to their sector.

Groups were encouraged to consider how changes in governance conditions and climate impacts might affect sector activities, resource availability, environmental protection needs, and potential conflicts between marine uses. Participants discussed whether the scenario required adjustments to previously proposed zoning areas or management considerations.

Team Report out: Results from the Zonation Design Criteria Exercise

Maritime and Tourism

This sector group considered a scenario characterized by poor governance and high climate change impacts. Participants described this future as one in which climate shocks, combined with weak governance and economic instability, would severely affect coastal and marine systems.

The group noted that coral reef systems and tourism attractions would likely be heavily degraded, while some coastal and tourism-dependent areas could become partially or fully inundated due to sea-level rise. They also highlighted the likelihood of major losses to tourism infrastructure, ports, and harbours, as well as job losses within the tourism economy. Overall, the group emphasized that under this scenario, both the environmental foundations of tourism and the infrastructure needed to support maritime and tourism activities would be significantly undermined.

Marine and Coastal Development

This group considered a scenario involving poor governance and strong climate-related pressures, which was characterized as a worst-case future scenario for Belize. Participants highlighted that under such conditions, increased climate impacts could exacerbate resource depletion, encourage greater encroachment by foreign interests, and potentially contribute to heightened social tensions, including civil unrest.

Participants focused on the effects of climate change along the coastline and the associated social and economic displacement that could result. They anticipated that climate impacts would force communities further inland and offshore, creating pressure for dredging, land reclamation, and new forms of coastal utilization. The group also projected increased degradation of coastal ecosystems such as mangroves and seagrass beds, which would in turn affect fisheries, tourism, and other livelihoods.

Participants further discussed the possibility of increased competition for space and resources, including expansion of alternative energy and infrastructure developments, and heightened pressure on offshore areas. It was also noted that communicating such scenarios to communities through visual or graphic representations could enhance understanding of potential future risks and impacts.

Fisheries

The Fisheries group considered a scenario of good governance and low climate change impacts, which was widely viewed as a preferred and aspirational scenario for Belize, given the importance of strong governance systems in supporting resilience to climate change. This allowed participants to focus on more solution-oriented and forward-looking options. Under such a scenario, the fisheries sector could move toward more sustainable and diversified production systems.

A key idea raised by the group was the expansion of mariculture and aquaculture to reduce pressure on wild collection, particularly for species used in the marine aquarium trade and other commercial activities. Participants mentioned ongoing or emerging interest in species such as oysters, sea cucumbers, cobia, and marine aquarium species. For traditional fisheries such as lobster, conch, and finfish, participants noted that fishing grounds are already relatively well defined, but future development may increasingly involve deeper offshore fisheries and banks.

Marine and Coastal Ecosystems

The Ecosystems group examined a scenario of poor governance and low climate change impacts. Participants concluded that even in the absence of severe climate stress, weak governance would significantly limit conservation progress.

The group indicated that under this scenario the existing Marine Protected Area system would likely remain largely unchanged, with little expansion or improvement. Restoration efforts would likely decline, research activity would be minimal, and enforcement across marine protected areas would weaken. Participants further noted that only those protected areas with strong revenue streams might continue to receive meaningful support, while others would risk becoming "paper parks" with legal designation but limited effective management.

Facilitator Reflection on the Scenario-Based Approach

In closing, Mr. Rosado highlighted the importance of using a scenario-based planning approach to test how MSP decisions might perform under different governance and environmental futures. He emphasized that the exercise was intended to help participants explore extremes, identify risks, and better understand the kinds of futures Belize should seek to avoid or work toward.

He also noted that the workshop had progressed from reviewing existing conditions and activity interactions toward more forward-looking planning, and that the outputs generated during the three-day workshop would help shape the next phase of consultations with communities. These future consultations, he explained, would be essential to ensure that broader sector-level perspectives are grounded in local realities and community context.

Strategic Recommendations for Advancing the Belize Sustainable Ocean Plan

The discussions, exercises, and stakeholder inputs generated during the Marine Spatial Planning (MSP) Future Planning Workshop produced several important insights that can guide the continued development and refinement of the Belize Sustainable Ocean Plan (BSOP). The following recommendations synthesize the key technical, governance, and planning considerations raised during the workshop and propose practical next steps for advancing the Marine Spatial Planning process.

1. Strengthen Spatial Data Integration and Management

Participants emphasized the importance of maintaining accurate and comprehensive spatial datasets to support evidence-based marine spatial planning decisions.

It is recommended that the MSP Unit:

- Continue updating and refining sector spatial datasets using the feedback provided during the data validation exercise.
- Integrate additional datasets identified during the workshop, including fisheries landing sites, mariculture locations, restoration sites, and maritime transport routes.
- Strengthen collaboration with government agencies, research institutions, and NGOs to ensure consistent data sharing and updating of spatial layers within the SeaSketch platform.
- Establish a periodic data review mechanism to ensure datasets remain current as sector activities evolve.

Improving the quality and accessibility of spatial data will strengthen the technical foundation of the BSOP and increase stakeholder confidence in planning outputs.

2. Finalize the Compatibility Matrix and Activity Definitions

The compatibility matrix proved to be an important tool for identifying interactions between marine uses. However, participants noted the need for clearer definitions and improved categorization of certain activities.

It is recommended that the MSP team:

- Incorporate the sector-specific compatibility adjustments identified during the workshop.
- Clarify terminology used within the matrix, particularly for activities such as cultural or indigenous fishing, sargassum management, water discharge categories, and coastal infrastructure activities.
- Remove activities that are illegal under national legislation from the matrix to ensure that the tool reflects only legally recognized marine uses. However, these activities should still be documented and addressed within the broader BSOP framework, particularly in relation to enforcement, compliance, and monitoring strategies.
- Further differentiate certain sector activities (for example fisheries gear types, spatial fishing zones, and tourism subcategories) to improve analytical accuracy.

These refinements will improve the matrix's usefulness as a planning and decision-support tool.

3. Integrate Emerging Ocean Uses into Future Planning Scenarios

Workshop discussions highlighted several emerging ocean uses that could significantly influence Belize's marine space in the coming years.

The MSP Unit should:

- Continue evaluating emerging activities such as mariculture expansion, seaweed farming, offshore renewable energy potential, marine tourism innovations, and new maritime infrastructure.
- Incorporate these potential uses into scenario modeling and spatial analysis to better anticipate future spatial pressures and opportunities.
- Develop preliminary policy guidance to ensure that emerging sectors develop in ways that are compatible with biodiversity protection and existing ocean uses.
- Engage coastal communities and resource users in the identification and development of emerging ocean uses to ensure that these activities reflect local realities, support economic stability, and foster a sense of ownership in the planning process.

Proactively incorporating emerging uses into planning scenarios will help ensure that the BSOP remains adaptive and forward-looking.

4. Strengthen Protection of Ecologically Sensitive Areas

Across multiple sessions, participants highlighted the importance of protecting critical marine habitats such as coral reefs, mangroves, seagrass beds, turtle nesting beaches, and spawning aggregation sites.

To support national biodiversity targets, it is recommended that the MSP process:

- Continue prioritizing sensitive ecosystems in spatial analyses and zoning discussions.
- Incorporate ecological connectivity between habitats when designing marine protection zones.
- Ensure that future zoning proposals align with Belize's national commitment to achieving 30 percent marine protection under the BSOP framework.
- Integrate restoration initiatives, including coral and mangrove restoration sites, into spatial planning datasets.

Strengthening ecosystem protection will support both biodiversity conservation and the sustainability of marine-dependent sectors.

5. Enhance Cross-Sector Coordination in Marine Governance

The workshop highlighted the complex interactions between sectors operating within Belize's marine space.

It is recommended that:

- The BSOP governance framework continue to facilitate dialogue between sectors through Technical Working Groups and stakeholder consultations.
- Sector representatives remain actively engaged in reviewing spatial planning outputs as the BSOP progresses.
- Coordination between regulatory agencies can be strengthened to address cross-sector issues such as maritime safety, coastal development regulation, environmental protection, and fisheries management.

Strong governance coordination will be essential to implementing effective marine spatial planning decisions.

6. Continue Scenario Testing and Adaptive Planning

The scenario development exercises provided valuable insights into how governance conditions and climate change pressures could influence future marine spatial planning decisions.

Moving forward, it is recommended that:

- The MSP team continue refining the future planning scenarios using the feedback generated during the workshop.
- Scenario outputs be used to test alternative zoning configurations and identify potential spatial conflicts or management challenges.
- Climate change considerations, including sea level rise, ecosystem shifts, and changing ocean conditions, be integrated into spatial planning analyses.

Adaptive planning will ensure that the BSOP remains resilient to future environmental and governance uncertainties.

7. Maintain Strong Stakeholder Engagement Throughout the Planning Process

The workshop demonstrated the value of participatory planning in building consensus and strengthening the legitimacy of marine spatial planning outcomes.

It is recommended that the BSOP process:

- Continue engaging stakeholders through structured consultations, technical workshops, and sector meetings.
- Share updated spatial analyses and zoning proposals with stakeholders for feedback prior to finalization.
- Maintain transparent communication on how stakeholder inputs are incorporated into planning decisions.

Sustained stakeholder engagement will help build long-term ownership and support for the Belize Sustainable Ocean Plan.

Conclusion

The Marine Spatial Planning (MSP) Future Planning Workshop represented an important milestone in the continued development of the Belize Sustainable Ocean Plan (BSOP). Over the course of three days, stakeholders from across government agencies, economic sectors, conservation organizations, and technical working groups engaged in structured dialogue and collaborative analysis to advance the future planning phase of Belize's national marine spatial planning process.

Through presentations, technical validation exercises, and sector-based discussions, participants reviewed the current status of the MSP process and contributed valuable insights to refine key planning tools. Activities such as the compatibility matrix review, prioritization of sector uses, spatial data validation, identification of emerging ocean uses, and scenario development exercises allowed participants to collectively examine how Belize's marine space is currently utilized and how it may evolve in the future.

The workshop reinforced the importance of evidence-based decision-making supported by reliable spatial datasets, clear governance frameworks, and active stakeholder engagement. Participants provided practical recommendations to improve spatial data layers, refine compatibility assessments, clarify activity classifications, and strengthen ecosystem protection considerations. These inputs will help ensure that the technical analyses underpinning the BSOP accurately reflect the operational realities of Belize's marine and coastal sectors.

Discussions also highlighted the interconnected nature of Belize's Blue Economy and its associated marine and coastal ecosystems. Fisheries, tourism, maritime transport, coastal development, and ecosystem conservation are closely linked, and effective marine spatial planning will require continued coordination across sectors to balance economic development with environmental sustainability. The workshop further emphasized the need to anticipate emerging ocean uses and integrate climate change and governance considerations into future planning scenarios to ensure that the BSOP remains adaptive and forward-looking.

The strong participation and constructive engagement demonstrated throughout the workshop reflect the shared commitment among Belize's stakeholders to responsible ocean governance. The insights generated during this engagement will inform the next phase of technical refinement, scenario testing, and zoning analysis as the MSP Unit continues advancing toward the finalization of the BSOP by November, 2026.

Ultimately, the outcomes of the Future Planning Workshop contribute to strengthening Belize's capacity to manage its marine resources in a coordinated, transparent, and sustainable manner. By integrating scientific analysis, stakeholder knowledge, and participatory decision-making, the BSOP process continues to move Belize closer to achieving its national commitment of protecting up to 30 percent of Belize's Ocean which will support resilient ocean-based livelihoods and economic development.

Annexes

ANNEX 1 WORKSHOP PARTICIPANT AGENDA

Participants' Agenda
Belize Sustainable Ocean Plan (BSOP)
Marine Spatial Planning (MSP) Future Planning Workshop
Dates: February 25-27, 2026
Location: Grand Resort & Residences Belize

The workshop will aim to:

- **Present current progress** on the MSP process, including a validation of existing conditions, available spatial datasets, and completed spatial analyses.
- **Set the stage for future planning** by identifying emerging uses, validating future scenarios created and drafting vision statement; and
- **Accelerate the future planning phase**, through collaborative application of the future scenario developed to guide potential sustainable use of Belize's marine space.

DAY 1 – MSP Future Planning Workshop

Time	Duration	Agenda Item	Lead
8:30	30 mins	Registration & Networking	CZMAI / MS Support
9:00	15 mins	Welcome & Opening Remarks	Mrs. Chantalle Samuels (CZMAI)
9:15	30 mins	Introduction, House Rules & Icebreaker	MS Facilitators
9:45	15 mins	Where Are We Now? MSP Progress Update	Ms. Janel McNab
10:00	15 mins	**Break**	
10:15	75 mins	Compatibility Matrix Presentation & Activity	Mr. Delwin Guevara
11:30	30 mins	Reporting of Compatibility Rationale	Mr. Delwin Guevara
Noon	60 mins	**Lunch**	
1:00	5 mins	Energizer: Afternoon Accelerator	
1:05	75 mins	Prioritization Activity	Mr. Samir Rosado
2:15	15 mins	**Break**	
2:30	30 mins	Reporting – Prioritization Results	Mr. Samir Rosado
3:00	45 mins	Final Data Validation	Mr. Delwin Guevara
3:45	15 mins	Day 1 Wrap-Up	MS Facilitators
4:00		Adjourn	MS Facilitators

DAY 2 – MSP Future Planning Workshop

Time	Duration	Agenda Item	Lead
8:30	30 mins	Registration & Networking	CZMAI / MS Support
9:00	15 mins	Day 2 Welcome & Recap	MS Facilitators
9:15	60 mins	Emerging Uses – Listing & Compatibility	Mr. Samir Rosado & Mr. Delwin Guevara
10:15	15 mins	**Break**	
10:30	30 mins	Compatibility Matrix Continuation	Mr. Samir Rosado & Mr. Delwin Guevara
11:00	30 mins	Emerging Uses Report Back	Sector Representatives / MS
11:30	30 mins	Scenario Development	Mr. Samir Rosado
12:00	60 mins	**Lunch**	
1:00	5 mins	Energizer: Afternoon Accelerator	MS Facilitators
1:05	40 mins	Scenario Development (Continuation)	Mr. Samir Rosado
1:45	30 mins	**Break**	

2:15	45 mins	Future Proofing MSP Goals & Objectives	CZMAI / MS Support
3:00	15 mins	Report Back – Goals & Objectives	MS Facilitators
3:15	30 mins	Zoning Framework & MPA Design Criteria	Mr. Samir Rosado
3:45	15 mins	Day 2 Wrap-Up	MS Facilitators
4:00		Adjourn	MS Facilitators

DAY 3 – MSP Future Planning Workshop

Time	Duration	Agenda Item	Lead (Presenter)
8:30	30 mins	Registration & Networking	CZMAI / MS Support
9:00	15 mins	Day 3 Welcome & Recap	MS Facilitators
9:15	60 mins	Future Planning – Scenario 1	Mr. Samir Rosado
10:15	15 mins	**Break**	
10:30	90 mins	Future Planning – Scenarios 2 & 3	Mr. Samir Rosado
12:00	60 mins	**Lunch**	
1:00	5 mins	Energizer: Afternoon Accelerator	MS Facilitators
1:05	45 mins	Future Planning – Scenario 4	Mr. Samir Rosado
1:45	45 mins	Wrap-Up & Next Steps	MS Facilitators
2:30		Closing Remarks & Adjourn	Mrs. Arlene Young (CZMAI)

ANNEX 2 WORKSHOP ATTENDANCE LIST

Sectors	Category	#	Groups			Member	Organization	Gender	Email	Day 1	Day 2	Day 3
Fisheries inclusive Aquaculture	Aquaculture & Maricult ure	1	CT		SC	Mr Nicanor Requena	Empowering Climate Solutions	Male	nicrequena@gmail.com	1	1	1
	Governm ent Departme nt & Statutory Bodies	2	CT		SC	Mrs Alicia Nunez	Belize Fisheries Department	Female	Alicia.nunez@fisheries.gov.bz	1	1	
	Multilate ral Agencies	3	T W G			Ms. Allena Joseph	CRFM	Female	allena.joseph@crfm.int	1	1	1
	Internati onal Conserva tion	4	CT			Mrs Nidia Chacon	TNC	Female	nidia.chacon@TNC.ORG	1	1	1

	Organization												
	Marine Protected Areas (MPA) Co-Manager	5					Mr. Valdemar Andrade	Turneffe Atoll Sustainability Association - TASA	Male	valdemar@tasabelize.com	1	1	
	Academia	6				SC	Dr Eden Garcia	University of Belize	Male	egarcia@ub.edu.bz	1	1	1
	Aquaculture & Mariculture	7					Ms. Carolyn Henri	Empowering Climate Solutions	Female	henri98203@comcast.net	1	1	1
Finance & Investment	Government Department & Statutory Bodies	8	CT			SC	Ms. Felicia Cruz	Blue Economy Unit Ministry of Blue Economy & Marine Conservation	Female	director@blueeconomy.gov.bz	1	1	1

	Government Department & Statutory Bodies	9	CT			SC	Mrs. Andria Rosado-Grinage	Blue Economy Unit Ministry of Blue Economy & Marine Conservation	Female	GrinageAA@blueeconomy.gov.bz	1	1	1
	Government Ministries	10					Ms Beverly Wade	Ministry of Blue Economy & Marine Conservation	Female	ceo@blueeconomy.gov.bz			1
	Government Ministries	11				SC	Mr. Frantz Smith	Ministry of Finance, Economic Transformation & Investment	Male	investment.policyofficer@invest.gov.bz	1		
	Government Ministries	12					Ms Nadicah Galves	Ministry of Finance, Economic Transformation & Investment	Female	investmenteconomist@invest.gov.bz		1	1
	Government Ministries	13				SC	Ms. Rubiceli Perera	Ministry of Finance, Economic Transformation & Investment	Female	Rubiceli.Perera@met.gov.bz	1	1	1

	Government Department & Statutory Bodies	14	CT			SC	Mr. Belizario Carballo	Blue Bond & Finance Permanence Unit-Office of the Prime Minister	Male	TO.bbfpunit@opm.gov.bz	1	1	1
	Government Department & Statutory Bodies	15					Mr. Jamani Balderamos	Blue Bond & Finance Permanence Unit-Office of the Prime Minister	Male	consultant.bbfpunit@opm.gov.bz	1	1	1
	International Conservation Organization	16	CT			SC	Ms. Alana Godoy	The Nature Conservancy (TNC)	Female	alana.godoy@TNC.ORG	1	1	1
Energy	Government Department &	17				SC	Ms. Areli Sutherland	Ministry of Public Utilities, Energy, Logistics & E-Governance	Female	areli.sutherland@energy.gov.bz		1	1

	Statutory Bodies												
Tourism	Government Ministries	18				SC	Mr. Darcy Correa	Ministry of Tourism, Youth, Sports & Diaspora Relations	Male	Darcy.Correa@tourism.gov.bz		1	1
	Tourism & Recreation	19				SC	Ms. Linette Canto	Belize Tourism Industry Association (BTIA)-Chair of Tourism TWG	Female	ed@btia.org	1	1	
	Tourism & Recreation	20					Ms. Renae Martinez	Belize Tourism Industry Association (BTIA)-Chair of Tourism TWG	Female	info@btia.org			1
	Government Department & Statutory Bodies	21	CT			SC	Mrs. Arlene Young	CZMAI	Female	director@coastalzonebelize.org	1	1	1

	Government Ministries	22					Ms. Joyce Tun	Institute of Archaeology, National Institute for Culture & History - NICH	Female	ecudirector@nichbelize.org	1	1	
	Government Ministries	23					Mr. Jose Ramos	Institute of Archaeology, National Institute for Culture & History - NICH	Male		1	1	1
	Government Ministries	24					Ms. Akirah August	Institute of Archaeology, National Institute for Culture & History - NICH	Female				1
Marine & Coastal Ecosystems	Government Department & Statutory Bodies	25					Caisha Fermin	CZMAI	Female	gistechnician@coastalzonebelize.org	1		

	International Conservation Organization	26					Henry Brown	Wildlife Conservation Society (WCS)-Chair of Marine and Coastal Ecosystems TWG	Male	hbrownjr@wcs.org	1	1	1
	Government Department & Statutory Bodies	27				SC	Ms. Minerva Gonzalez	Forest Department	Female	GonzalezMI@gobmail.gov.bz	1	1	1
	International Conservation Organization	28		TWG		SC	Nicole Auil Gomez	Wildlife Conservation Society (WCS)-Chair of Marine and Coastal Ecosystems TWG	Female	nauilgomez@wcs.org	1		
	Academia	29		TWG	NCR		Noel McCord	University of Belize Environmental	Male	noel.mccord@ub.edu.bz	1		1

					MN			Research Institute - UB ERI					
	Marine Protected Areas (MPA) Co-Manager	30		TWG	NCRMN		Mr. Julio Noble	HolChan Marine Reserve	Male	biologist@holchanmarinereserve.org		1	1
Marine & Coastal Development	Government Department & Statutory Bodies	31				SC	Mr. Edgar Ek	Department of the Environment	Male	deputy@environment.gov.bz	1	1	
	Government Department & Statutory Bodies	32	CT			SC	Mrs. Chantalle Samuels	CZMAI	Female	ceo@coastalzonebelize.org	1	1	1

	Government Department & Statutory Bodies	33					Ms. Michelle Alvarez	Mining Unit, Ministry of Natural Resources Petroleum & Mining	Female	michelle.alvarez@naturalresources.gov.bz	1	1	1
	Government Department & Statutory Bodies	34					Ms. Chelsea Perera	CZMAI	Female		1	1	1
	International Conservation Organization	35					Mrs. Jane Salazar Mcloughlin	The Nature Conservancy	Female		1	1	1
Maritime Administration	Government Department &	36				SC	Mr. Michael Jenkins	Belize Port Authority	Male	operationsandsafety@bmpa.bz	1	1	1

	Statutory Bodies												
	Government Department & Statutory Bodies	37				SC	Mr. Kaylon Young	Acting Ports Commissioner	Male	commissioner@bmpa.bz	1	1	1
	Government Department & Statutory Bodies	38				SC	Lieutenant Junior Grade Jerry Vasquez	Belize National Coast Guard	Male	jerryvasquez414@gmail.com	1	1	1
	Government Department & Statutory Bodies	39					Israel Correa	CZMAI	Male	gismanager@coastalzonebelize.org	1	1	1
	Government Departm	40		TWG			Mr. Ernie Howe	Belize High Seas Fisheries Unit - BHSFU	Male	ernie.howe@bhsfu.gov.bz	1	1	1

	ent & Statutory Bodies												
Planning Committee		41	CT				Samir Rosado	CZMAI	Male	msplead@coastalzonebelize.org	1	1	1
		42	CT				Janel McNab	CZMAI	Female	mspcoordinator@coastalzonebelize.org	1	1	1
		43	CT				Delwin Guevara	CZMAI	Male	mspspatialanalyst@coastalzonebelize.org	1	1	1
		44	CT				Serena Reyes	CZMAI	Female	bsop@coastalzonebelize.org	1	1	1
		45	CT				Kelsie Garbutt	CZMAI	Female	mspcommunications@coastalzonebelize.org	1	1	1
		46	CT				Janiel Chan	CZMAI	Male	mspgistechnician@coastalzonebelize.org	1	1	1

		47					Esmay Muslar	Facilitator/Consultant	Female		1	1	1
		48					Shaliny Saunders	Facilitator/Consultant	Female		1	1	1
		49					Latrell Solis	Facilitator/Consultant	Male		1	1	1
		50					Jennifer Sacalxot	Facilitator/Consultant	Female		1	1	1

ANNEX 3 WORKSHOP PLANNING COMMITTEE

Sectors	#	Group	Member	Organization	Gender	Email	Mobile	Day 1	Day 2	Day 3
Planning Committee	41	CT	Samir Rosado	CZMAI	Male	msplead@coastalzonebelize.org		1	1	1
	42	CT	Janel McNab	CZMAI	Female	mspcoordinator@coastalzonebelize.org		1	1	1
	43	CT	Delwin Guevara	CZMAI	Male	mspspatialanalyst@coastalzonebelize.org		1	1	1
	44	CT	Serena Reyes	CZMAI	Female	bsop@coastalzonebelize.org		1	1	1
	45	CT	Kelsie Garbutt	CZMAI	Female	mspcommunications@coastalzonebelize.org		1	1	1
	46	CT	Janiel Chan	CZMAI	Male	mspgistechnician@coastalzonebelize.org		1	1	1
	47		Esmay Muslar	Facilitator/Consultant	Female	emuslar.em@gmail.com	615-2690	1	1	1

	48		Shaliny Saunders	Facilitator/Consultant	Female	Shalinysaunders28@gmail.com	615-7777	1	1	1
	49		Latrell Solis	Facilitator/Consultant	Male	latrell.solis@gmail.com	615-2699	1	1	1
	50		Jennifer Sacalxot	Facilitator/Consultant	Female	sacalxotjennifer12@gmail.com	624-2406	1	1	1

ANNEX 4 WORKSHOP EVALUATION

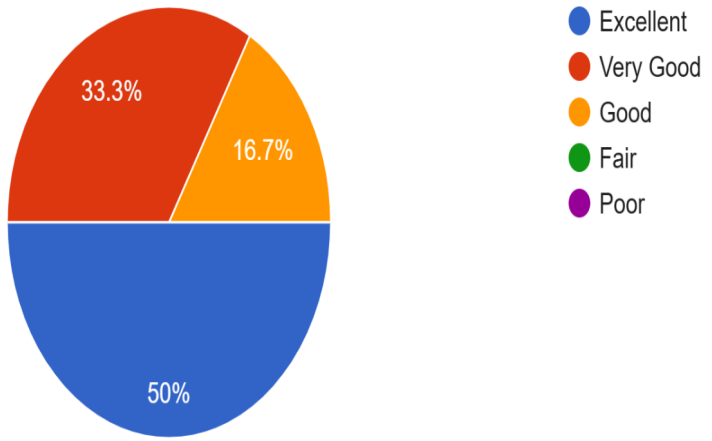
Workshop Evaluation Results

Total number of participants

Section 1: General Feedback

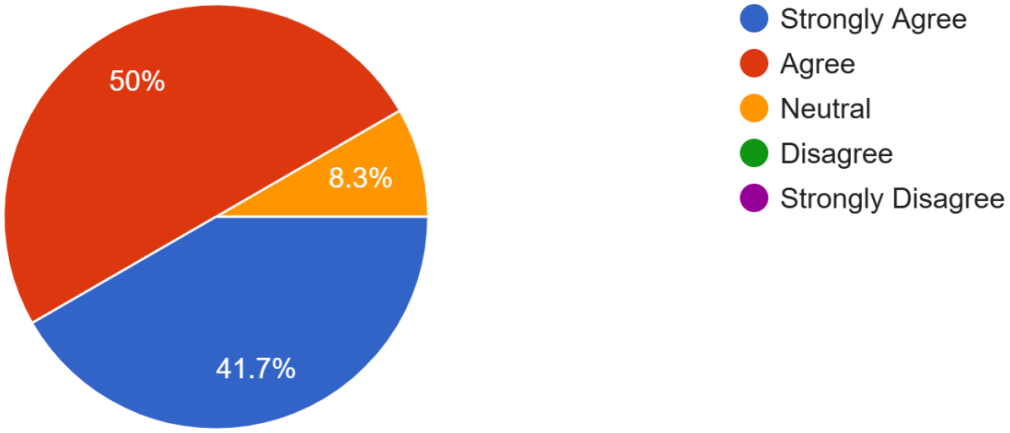
1. Overall, how would you rate this workshop?

12 responses



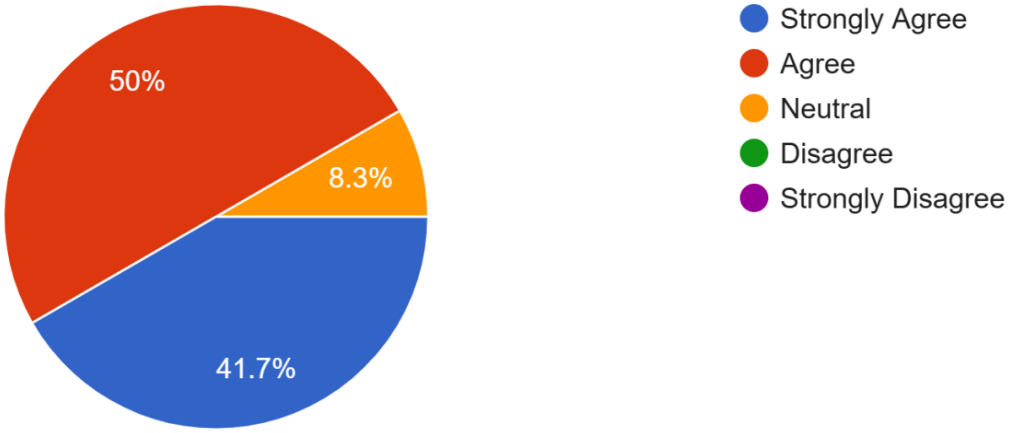
2. The workshop objectives were clearly communicated.

12 responses



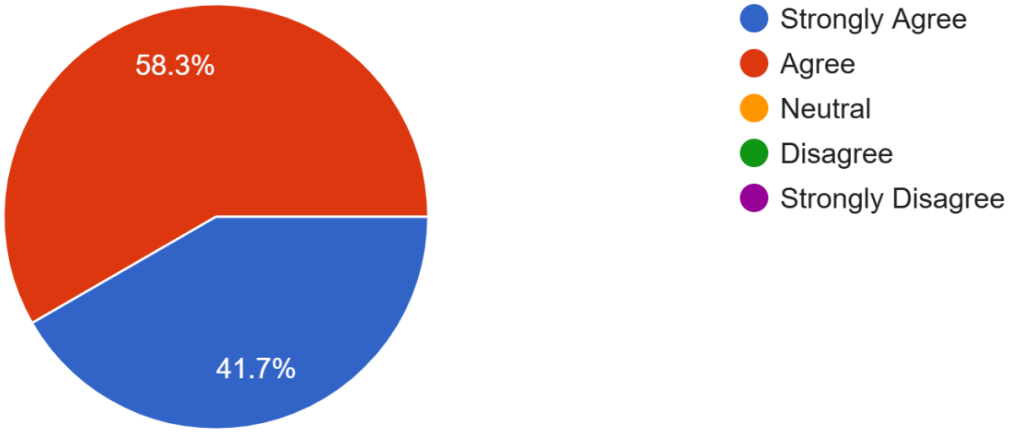
3. The workshop objectives were met.

12 responses



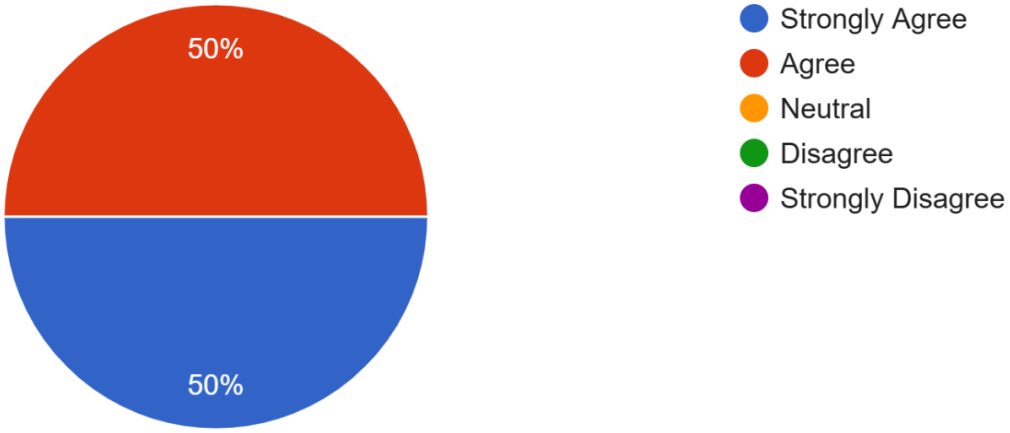
4. The sessions on Compatibility Matrix strengthened my understanding of sector trade-offs.

12 responses



5. The Emerging Uses session helped me anticipate future spatial planning challenges.

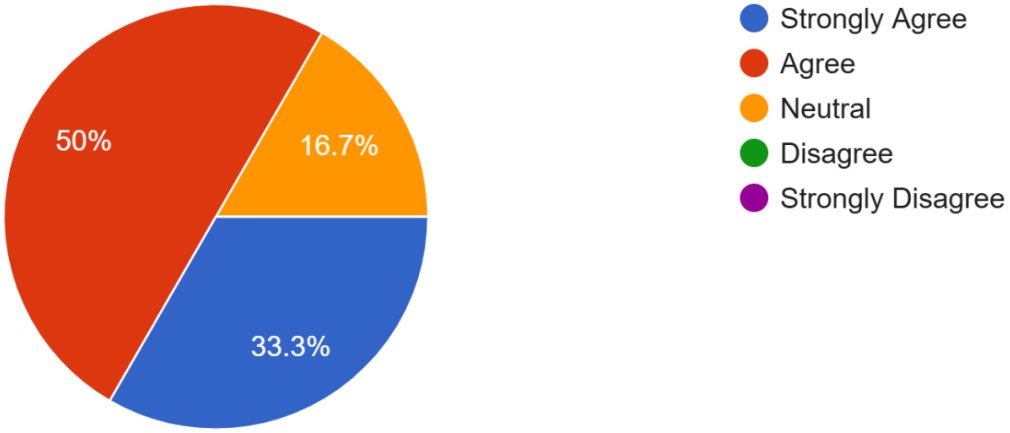
12 responses



Section II: Facilitation & Delivery

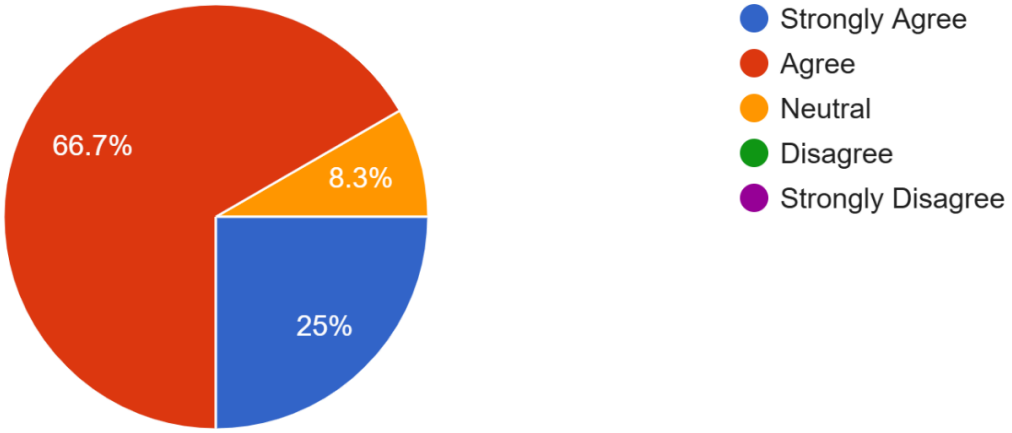
6. The Scenario Development exercises were effective in testing zoning resilience under future conditions.

12 responses



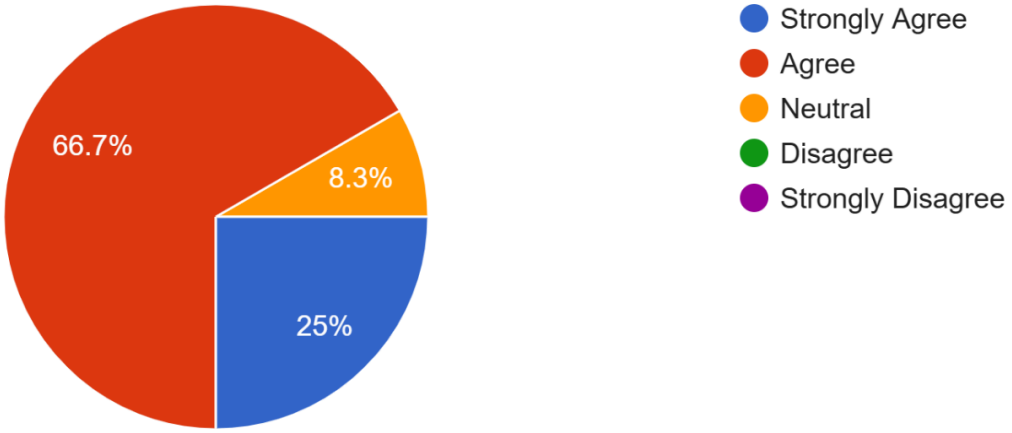
7. The Future-Proofing of Goals & Objectives strengthened the MSP framework.

12 responses



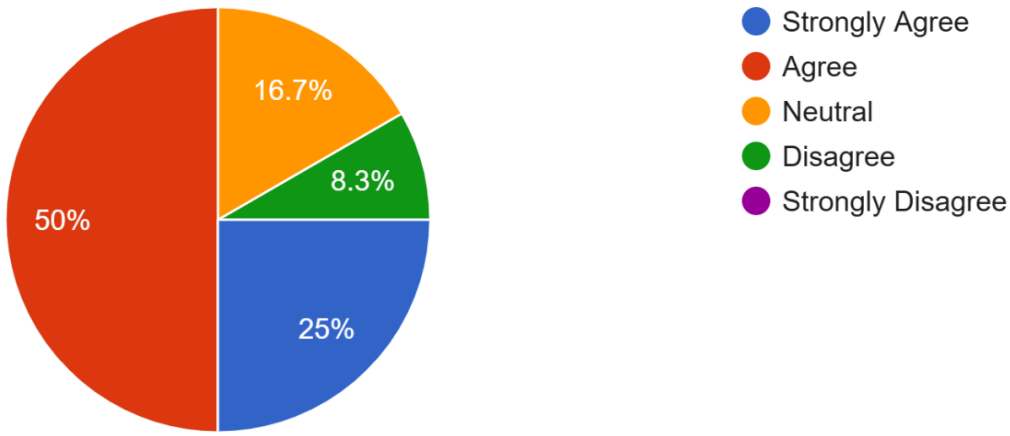
8. The Future-Proofing of Goals & Objectives strengthened the MSP framework.

12 responses



9. I am confident that validated datasets and outputs reflect my sector's inputs accurately.

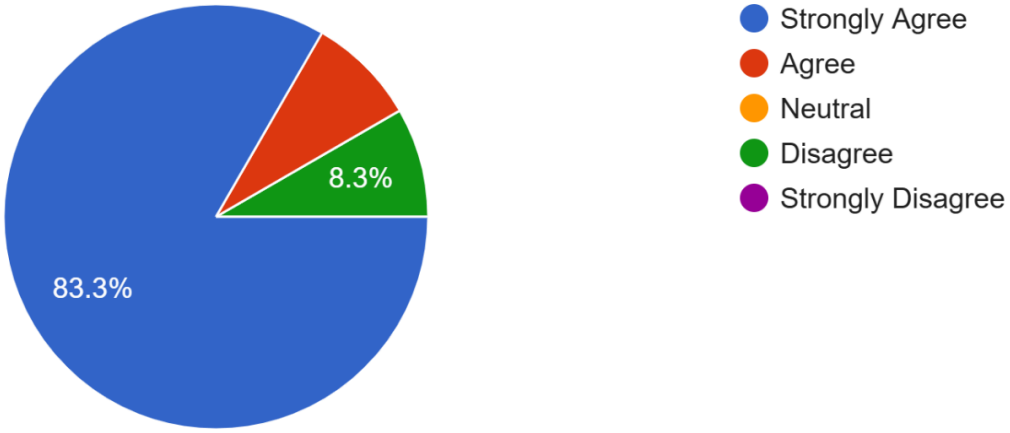
12 responses



Section III: Participation & Learning Environment

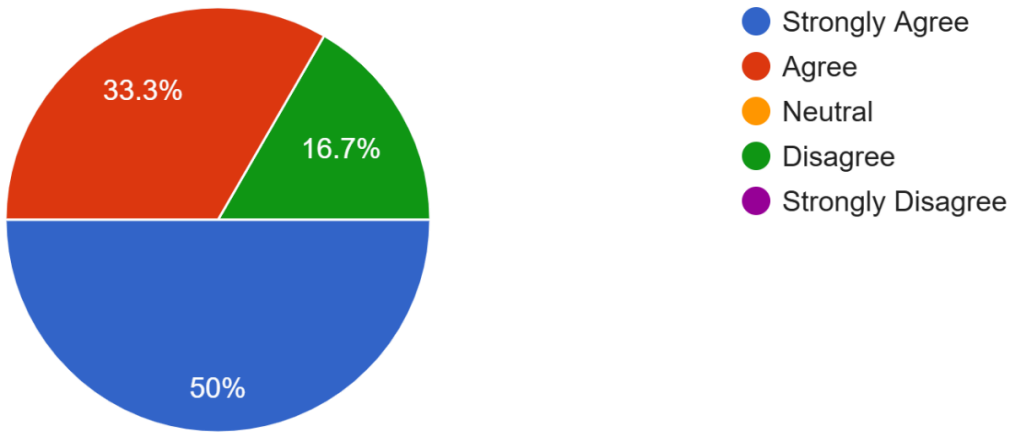
10. The facilitators created an inclusive and respectful environment.

12 responses



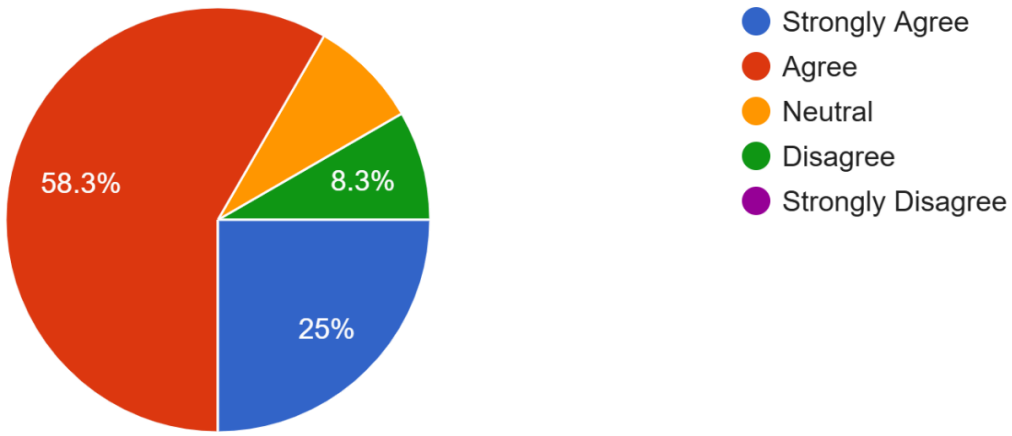
11. My sector had adequate opportunity to contribute to discussions.

12 responses



13. Time management across sessions was effective.

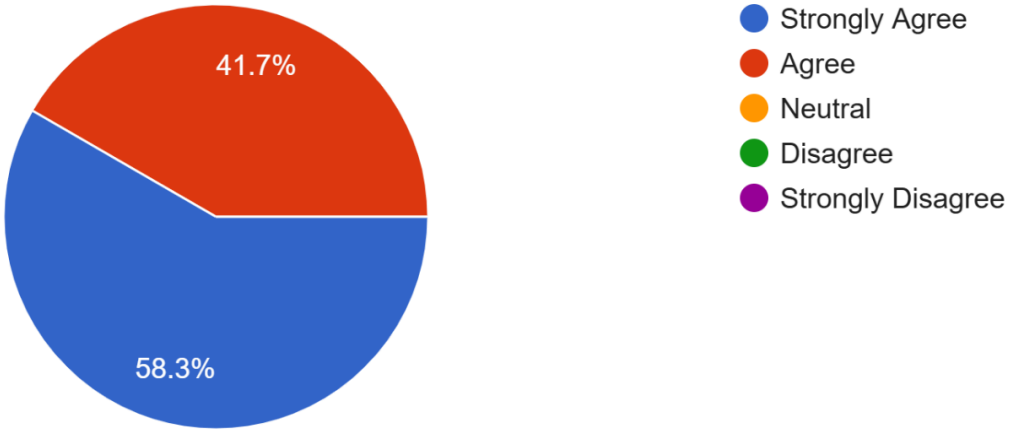
12 responses



Section 4: Outcomes & Impact

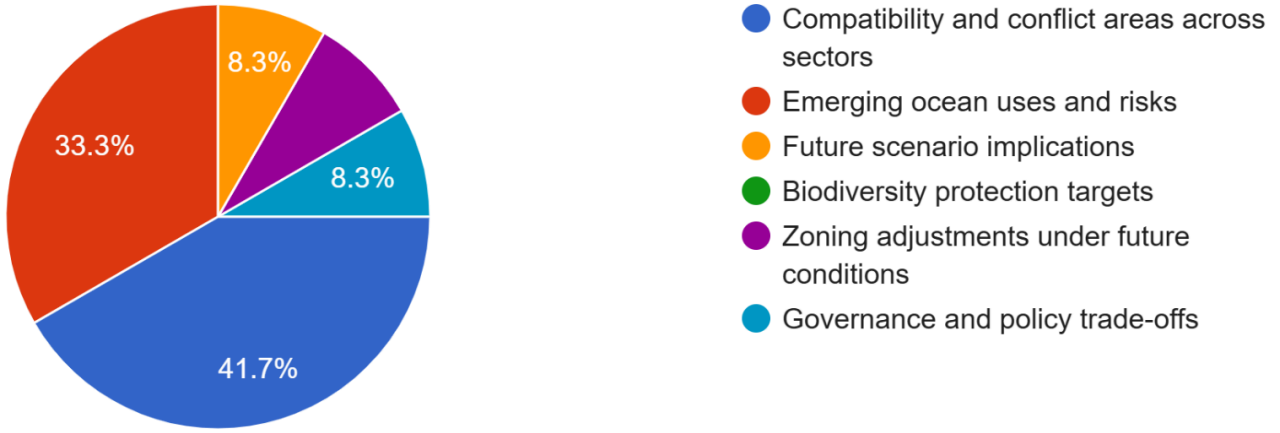
14. I believe the outputs generated will meaningfully inform the finalization of the BSOP.

12 responses



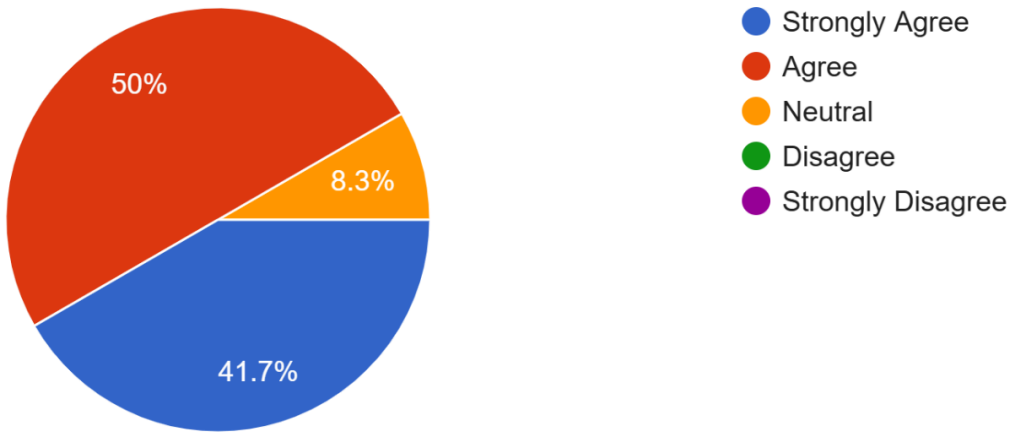
15. As a result of this workshop, I have a clearer understanding of (Check all that apply):

12 responses



16. This workshop strengthened cross-sector alignment.

12 responses



17. What was the most valuable aspect of this workshop?

12 responses

- The compatibility matrix was the most valuable for me, as I understood more of the activities occurring in different sectors.
- Exposure to cross-sectoral perspectives and outlooks.
- The group effort to ensure that implication to each sector was addressed.

- Discussions with sector colleagues about interactions with other sectors. Hearing from other sectors what their issues are.
- I had attended an MSP workshop in the past but being a part of the maritime admin was very informative for me.
- I believe it was the atmosphere which was aimed toward making voices from each sector heard.
- The evaluation of work from previous workshops.
- How sectors can collaborate and coordinate to avoid conflicts.

18. What was the most challenging aspect of this workshop?

12 responses

- Time allotted for the compatibility matrix was insufficient.
- The icebreakers may have worked too well because I found it a very noisy, clashing kind of environment that made any productive work difficult. Some sectors had much more ponderance in terms of data and resources to work with than others. (Note: there's more than one question in this form for which multiple answers are asked but the question format allows only one choice.)
- The most challenging aspect was the compatibility with future scenarios.
- I thought the 'game' with the pins got a little out of hand. It was supposed to be a device to keep people engaged and off their phones, instead, it became a focus in itself, distracting from the work.
- I did not find any of the topics challenging but since I was present in all the meetings it was a bit difficult to understand the entire concept.
- Interpreting the intended meaning of some naming criteria
- That not everyone was knowledgeable in all fields and had to learn from other respective professionals.
- Not sure if there was any major conflict but perhaps understanding the seasketch was a bit challenging as this was relevantly new to me.
- Time constraints prevented proper consideration of each and every use, scenario, criteria, goals, targets
- Time

- Scenario validation and future planning sessions were the most challenging because they forced participants to confront uncomfortable possibilities, simplify complex ideas for broader audiences, and still produce actionable conservation goals.
- Projecting imagined future scenarios

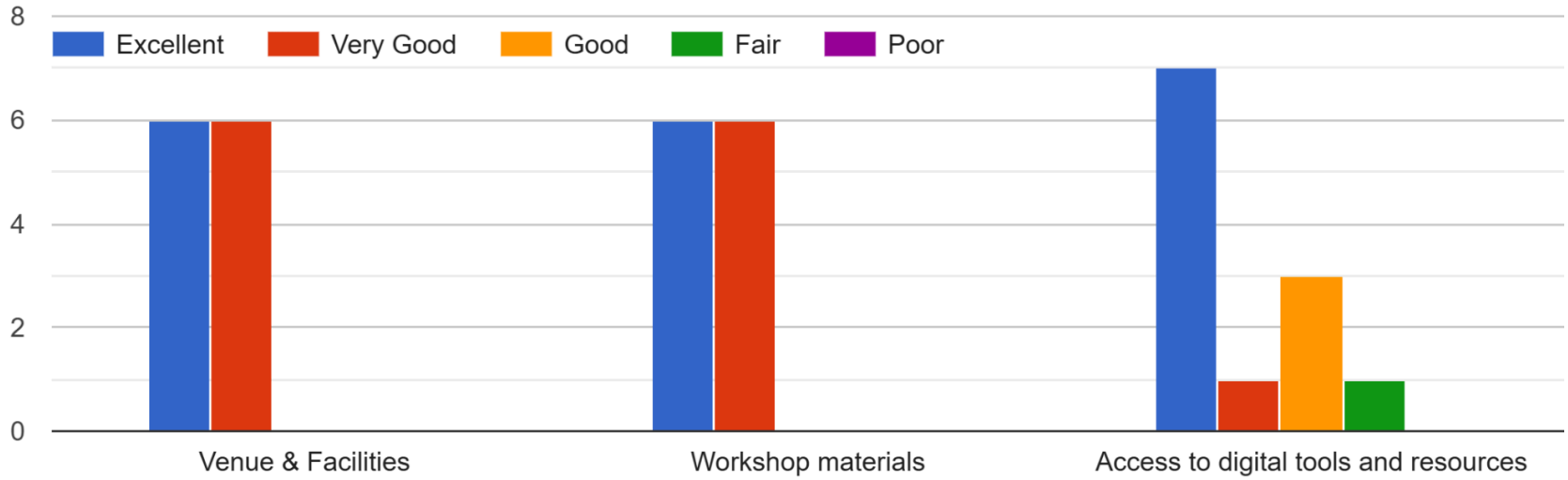
19. What improvements would you recommend for future MSP workshops?

12 responses

- Wider-spaced tables; the room was very loud during the group discussions and had to compete with other groups to be heard.
- Extensive pre-consultations with sector leads to ensure all available resources/uses are taken into account.
- Shorten the time to ensure that engagement is retained.
- In general, I thought it was excellent and well organized. Clearer, standardized definitions of sector activities would have strengthened the compatibility matrix exercise. The absence of shared definitions led to varied interpretations across groups, which affected the consistency of scoring and decision-making. Providing these reference materials at the start of the workshop would support more aligned and effective participation.
- Having definitions to prevent biases from personal interpretations
- To just keep improving, because it was a well planned and executed workshop, that produced valuable

Section 5: Logistics & Materials

20. How would you rate the following aspects?

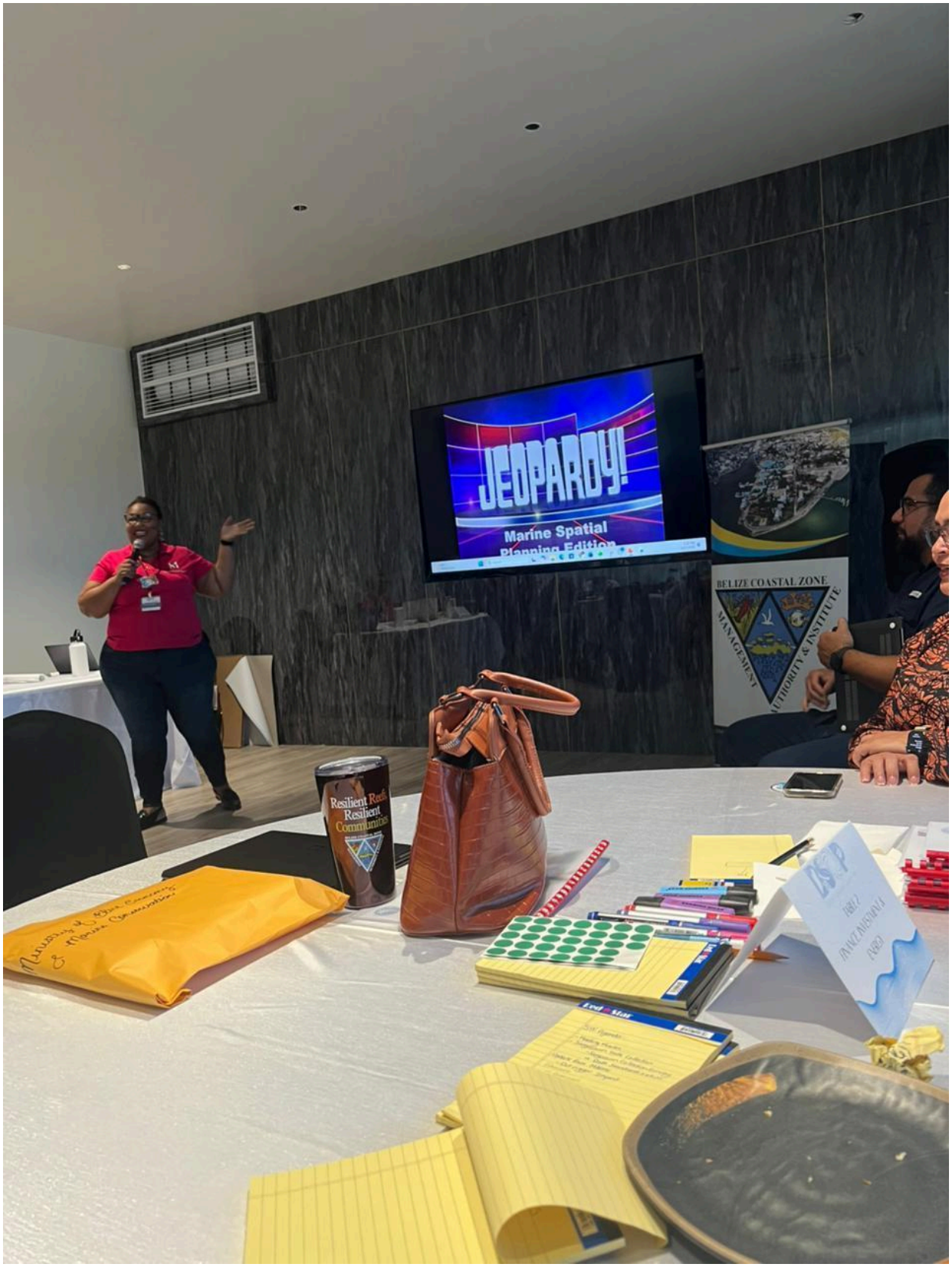


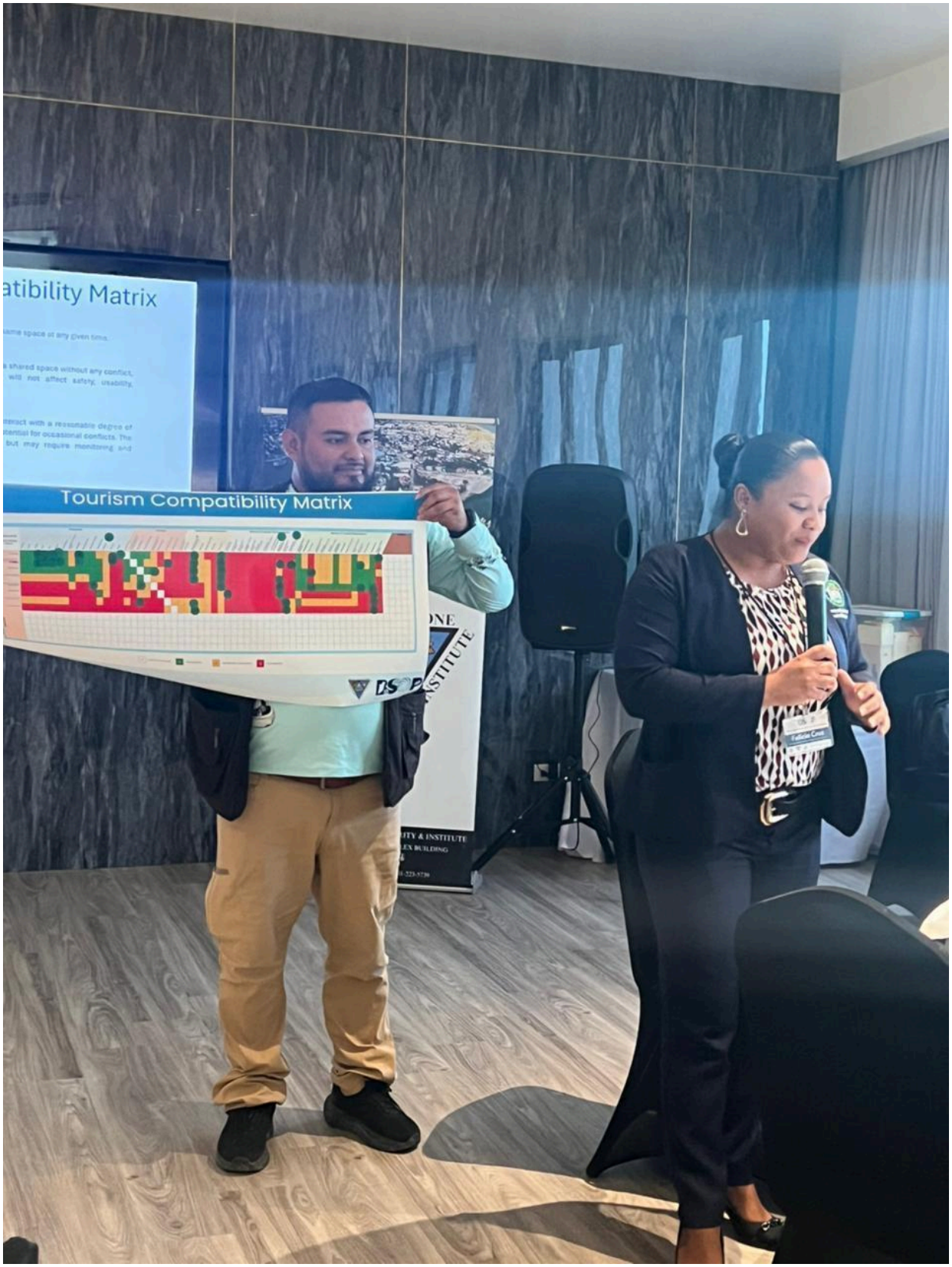
ANNEX 5 WORKSHOP PHOTOS

Group Photo

Workshop Candids


Association Compatibility Matrix
BSOP
2026


JEOPARDY!
Marine Spatial
BELIZE COASTAL ZONE
MANAGEMENT
AUTHORITY & INSTITUTE
Resilient Reefs
Resilient
Communities


atibility Matrix
Tourism Compatibility Matrix


BIOLOGY


Valadition of
Compatibility
Matrix
BSOP
MSP Future Planning Workshop
Grand Residences & Resort Belize
25th Feb 2026
Samir Rosado
Delwin Guevara


Presenter:
Chantalle Samuels
Chief Executive Officer
Coastal Zone Management Authority & Institute
Welcome


Next Steps
After today:
• Outputs will be consolidated
• Draft goals/objectives will be circulated
• Final version to be used in Plan document


Fisheries Compliance Monitoring

ANNEX 6 Compatibility Matrix Exercise – Sector Findings

This appendix presents the original observations and compatibility adjustments identified by workshop participants during the Compatibility Matrix review exercise. The tables below reflect the inputs recorded by each sector group, including the interaction reviewed, the recommended compatibility score, and the rationale provided by participants.

These tables are presented as documented during the workshop discussions to preserve the integrity of stakeholder feedback.

This appendix will include:

- The **original tables from each sector**
- The **dot numbers**
- The **recommended scores**
- The **rationales exactly as recorded**

6.1 Fisheries Sector – Findings

Lead Facilitator: Nidia Chacon

Detailed Findings Table

Dot / Interaction	Recommended Score	Rationale
1 Conch – Traditional Beach Trap	No Spatial Overlap	Beach traps operate in shallow coastal areas while conch fishing occurs offshore.
2 Reef Fisheries – Beach Trap Fishing	No Spatial Overlap	Reef fishing and beach traps occur in different environments.
3 Lobster – Pelagic	No Spatial Overlap	Pelagic fishing occurs offshore and does not overlap with lobster fishing grounds.

4 Conch – Pelagic	No Spatial Overlap	Activities occur in different fishing zones.
5 Pelagic – Traditional Beach Trap	No Spatial Overlap	Pelagic fishing occurs offshore while beach traps operate in shallow areas.
6 Subsistence Fishing – Seaweed Farming	Moderately Compatible	Competition for space between subsistence fishing and seaweed farming.
7 Lobster – Pelagic	Moderately Compatible	Potential conflict if activities occur in the same fishing zones.
8 Lobster – Pelagic	Moderately Compatible	Potential conflict if activities occur in the same fishing zones.
9 Pelagic – Ports & Harbour Operations	Moderately Compatible	Compatibility depends on navigational lanes and vessel traffic.
10 Pelagic – Water Taxi	Moderately Compatible	Potential interaction between transport routes and fishing activities.
11 Gill Net / Illegal Fishing	Incompatible	These activities are prohibited and should not be considered legitimate spatial uses.
12 Pelagic – Overwater Structures	Moderately Compatible	Future offshore infrastructure may overlap with fishing zones.
13 Seaweed – Overwater Structures	Moderately Compatible	Habitat modification may affect water circulation and environmental conditions.
14 Sea Cucumber – Overwater Structures	Moderately Compatible	Habitat modification may affect aquaculture productivity.

15 Lobster, Conch & Finfish – Sargassum Containment	Moderately Compatible	Containment systems can be deployed without obstructing fishing activities.
16 Sea Cucumber Farming – Brackish/Grey Water	Incompatible	Potential contamination from boat discharge may impact water quality.
17 Fisheries Activities – Turtle Nesting	No Spatial Overlap	Fisheries activities occur offshore while turtle nesting occurs on beaches.
18 Science & Research – Fisheries Activities	Compatible	Research activities can coexist with fisheries operations.
19 Deep Slope – Snorkeling / Scuba	Compatible	
20 Pelagic Sport Fishing – Game Fishing	Moderately Compatible	
21 Deep Slope – Animal Watching	Moderately Compatible	
22 Deep Slope – Water Sports	Moderately Compatible	
23 Deep Slope – Nautical Tourism	Moderately Compatible	
24 Seamount – Deep Sea Fisheries	Moderately Compatible	
25 Deep Sea – Migration Routes	Moderately Compatible	
26 Deep Sea – Mega Marine Fauna	Moderately Compatible	
27 Landing Facilities – Liquid Sewage Disposal	Incompatible	

28 Landing Facilities – Development Dredging	Moderately Compatible	
29 Landing Facilities – Dredged Material Disposal	Moderately Compatible	
30 Landing Facilities – Mangroves	Incompatible	
31 Landing Facilities – Seagrass	Moderately Compatible	
32 Landing Facilities – Coral Reefs	Moderately Compatible	
33 Landing Facilities – Turtle Nesting	Incompatible	
34 Deep Sea – Nautical / Cruise Tourism	Moderately Compatible	
35 Deep Slope – Shipping	Moderately Compatible	
36 Deep Sea – Shipping	Moderately Compatible	

Table A1: Fisheries Sector Compatibility Matrix Review – Raw Inputs

Special Notes and Sector Recommendations

- Finfish fisheries should be separated by spatial fishing zones: Finfish (R`eef), Finfish (Deep Slope), and Finfish (Deep Sea / Distant Water).
- Sport fishing should be separated by fishing environment and gear type: Flats fishing (shallow, regulated) and Game fishing (open water).
- Mariculture activities should be differentiated by scale and ecological footprint: Small-scale / low trophic aquaculture and Industrial large-scale operations.
- Consider seamount fisheries as a specialized fishery category.
- Development of emerging fisheries activities will require targeted science and research to inform sustainable management.

Analytical Summary of Compatibility Adjustments

Compatibility Category	Number of Interactions	Interpretation
Compatible	2	Activities can coexist with minimal operational conflict.
Moderately Compatible	22	Activities may coexist but require monitoring or spatial management.
Incompatible	5	Activities cannot occur together due to environmental or operational conflict.
No Spatial Overlap	7	Activities occur in different geographic zones.

6.2 Tourism Sector – Findings

Detailed Findings Table

Dot / Interaction	Recommended Score	Rationale
1 Swimming/Snorkelling – Seaweed	Moderately Compatible	Seaweed activities should occur within designated areas similar to beach traps.
2 Swimming/Snorkelling – Seaweed	Moderately Compatible	Same rationale as Interaction 1; spatial designation required.
3 Tourism – Gillnets	Removed	Gillnets are banned under national legislation and therefore should not be included in the matrix.
4 Cultural Fishing	Terminology Change	Replace 'Cultural Fishing' with 'Indigenous Fishing' to reduce ambiguity.

5–12 Finfish/Sport Fishing – Swimming/Snorkelling	Moderately Compatible	Fishing with line and hook presents safety concerns for swimmers, snorkellers, and divers.
13 Aquarium Trade – Cultural Conservation	Incompatible	Potential impacts cannot be effectively controlled.
14 Illegal Fishing	Incompatible	Illegal fishing activities cannot coexist with tourism activities.
15 Nautical Tourism – Educational Activities	Moderately Compatible	Activities can coexist but require safety management.
16 Cultural/Historic Conservation – Educational Activities	Moderately Compatible	Educational activities can occur but require monitoring and management.
17 Tourism – Enforcement Areas	Incompatible	Tourism activities should not occur in enforcement-designated areas.
18 Recreational Personal Watercraft – Tourism	Moderately Compatible	Activities can coexist but require monitoring and management.
19 Overwater Construction – Water Sports	Incompatible	Operational and safety conflicts between activities.
20 Sargassum Management	Terminology Change	Updated to 'Sargassum Collection'.
21 Sargassum Collection – Tourism	Incompatible	Activities cannot coexist in the same space.
22 Liquid Sewage Disposal – Tourism	Incompatible	Environmental pollution risks make these activities incompatible.
23 Grey Water Discharge – Snorkelling	Incompatible	Water quality concerns conflict with tourism activities.
24 Brackish Grey Water	Terminology Change	Corrected to 'Ballast Water'.

25 Restoration – Educational Tourism	Moderately Compatible	Educational activities support restoration awareness and funding opportunities.
26 Restoration – Cultural/Historic Conservation	Moderately Compatible	Activities can coexist with monitoring and environmental safeguards.
27 Science & Conservation – Cultural/Historic Conservation	Moderately Compatible	Research activities can occur with permits and management oversight.
28 Science & Research – Tourism Activities	Moderately Compatible	Research may require sampling but can occur alongside tourism with regulation.
29 Seamounts – Cultural/Historic Tourism	Moderately Compatible	Activities can occur with management measures.
30 Seamounts – Water Sports	Moderately Compatible	Requires monitoring and spatial management.
31–32 Seamounts – Nautical/Cruise Tourism	Moderately Compatible	Activities can coexist with proper regulation and oversight.
33 Sandy Muddy Seafloor – Educational Tourism	Incompatible	Not considered suitable for tourism activities.

Table 6.2: Tourism Sector Compatibility Matrix Review – Raw Inputs

Special Notes and Sector Recommendations

- Participants recommended replacing the term 'cultural fishing' with 'indigenous fishing' to better reflect recognized fishing practices. Illegal fishing and gillnet activities should be removed from the compatibility matrix as they represent prohibited activities.
- Tourism activities require careful spatial planning and management to ensure safety for swimmers, snorkellers, and divers where other marine uses occur.
- Terminology updates included replacing 'Sargassum Management' with 'Sargassum Collection' and correcting 'Brackish Grey Water' to 'Ballast Water'.

- Pollution-related activities such as liquid sewage disposal and grey water discharge were identified as incompatible with tourism activities due to environmental and public health risks.

Analytical Summary of Compatibility Adjustments

Compatibility Category	Number of Interactions	Interpretation
Compatible	0	Tourism interactions rarely occur without some level of management.
Moderately Compatible	18	Tourism activities can coexist but require monitoring or spatial management.
Incompatible	9	Activities cannot occur together due to safety, environmental, or regulatory conflict.
Removed / Terminology Changes	4	Activities removed due to legal prohibition or updated terminology.

6.3 Marine & Coastal Development – Findings

Lead Facilitator: Belizario Carballo

Detailed Findings Table

Dot / Interaction	Recommended Score	Rationale
1 Flat fishing – Overwater construction	No Spatial Overlap	Activities occur in different parts of the water column and do not interfere spatially.
2 Pelagic fishing – Overwater construction	No Spatial Overlap	Pelagic fishing gear and operations may conflict with fixed structures.

3 Seaweed farming – Overwater structures	Moderately Compatible	Compatibility depends on size and footprint of structures.
4 Cultural uses – Overwater construction	Moderately Compatible	Possible access and visual conflicts.
5 Cultural & Historic Conservation	Moderately Compatible	Heritage protection may require management near development.
6 Water Sports	Moderately Compatible	Safety management required where recreation overlaps with infrastructure.
7 Navigational Aids	Compatible	Essential for maritime safety and do not interfere with other activities.
8 Shipping	Compatible	Shipping lanes can coexist with development when properly managed.
9 Port & Harbour dredging	Compatible	Operationally linked development activities.
10 Development dredging	Compatible	Often required for coastal infrastructure development.
11 Sand & Gravel mining	No Spatial Overlap	Primarily inland activity within BSOP planning boundary.
12 Sargassum containment boom	Moderately Compatible	Placement must be managed to avoid conflicts.
13 Land reclamation	Compatible	Integral component of coastal development.
14 Brackish grey water discharge	Moderately Compatible	Potential water quality impacts require monitoring.

15 Seagrass ecosystems	Moderately Compatible	Development may impact seagrass habitats.
16 Restoration activities	Moderately Compatible	Requires environmental safeguards.
17–22 Various interactions	Moderately Compatible	Activities can coexist with management measures.
24 Seamount interactions	No Spatial Overlap	Located offshore and outside development zones.
25 Sand & Gravel – Lobster	No Spatial Overlap	Inland activity does not overlap marine fisheries.
26 Sand & Gravel – Sargassum boom	Moderately Compatible	Limited interaction possible.
27 Sand & Gravel – Sargassum management	Moderately Compatible	Interaction manageable through planning.
28 Sand & Gravel – Sand & Gravel	No Spatial Overlap	Occurs inland outside marine zone.
29 Sand & Gravel – Sargassum containment	Moderately Compatible	Possible overlap depending on placement.
30 Sand & Gravel – Sargassum management (Conch)	Moderately Compatible	Operational separation likely.
31 Sand & Gravel – Finfish	No Spatial Overlap	Different spatial locations.
32–33 Sargassum containment / management	Moderately Compatible	Requires management to avoid ecosystem impacts.
35–36 Sargassum containment / management	Moderately Compatible	Activities may coexist with monitoring.
37–38 Educational swimming	Incompatible	Direct conflict with development activities.

39 Nautical tourism – Liquid sewage disposal	Incompatible	Environmental pollution risk.
40 Cruise tourism – Liquid sewage disposal	Incompatible	Incompatible with marine ecosystem protection.
41–43 Cruise tourism interactions	Moderately Compatible	Compatibility depends on operational management.
44–45 Port & harbour operations	Moderately Compatible	Requires coordination of activities.
46 Water taxi operations	Moderately Compatible	Navigational overlap requires management.
47 Dredging & disposal	Moderately Compatible	Environmental management required.
48 Land reclamation	Moderately Compatible	Potential environmental constraints.
49 Port & Harbour dredging	Compatible	Operational compatibility.
50 Dredged material disposal	Moderately Compatible	Requires monitoring and site management.
53 Development dredging – Port dredging	Compatible	Linked development activities.
54 Development dredging – Offshore infrastructure	Moderately Compatible	Possible spatial overlap.
55 Development dredging – Brackish grey water	No Spatial Overlap	Activities occur in different areas.
56–57 Overwater structures – dredged disposal	Moderately Compatible	Disposal sites must be carefully managed.
58 Offshore infrastructure – dredged disposal	Moderately Compatible	Interaction manageable through planning.

59 Offshore infrastructure – land reclamation	Moderately Compatible	Potential overlap with planning controls.
60 Land reclamation – dredged disposal	Compatible	Dredged materials often used in reclamation.
61 Sand beaches/sandbars – offshore infrastructure	Incompatible	Infrastructure may damage natural features.
62 Sargassum boom – species migration	Moderately Compatible	Placement must avoid blocking migration routes.
63 Sargassum management – species migration	Moderately Compatible	Requires ecological management.
64 Mangrove ecosystem – land reclamation	Moderately Compatible	Potential mangrove habitat impacts.
65–68 Various interactions	Compatible	Activities can coexist without significant conflict.
69 Seamounts – port dredging	No Spatial Overlap	Located outside port development zones.
70 Offshore infrastructure – seamounts	No Spatial Overlap	Different spatial zones.
71 Land reclamation – seamounts	No Spatial Overlap	Activities occur in separate locations.

Table 6.3: Marine & Coastal Development Sector Compatibility Matrix Review – Raw Inputs

Special Notes and Sector Recommendations

- Sand and gravel activities should generally be classified as having no spatial overlap with marine activities because they are primarily inland within the BSOP planning boundary.
- Participants recommended removing illegal fishing and gillnet activities from the compatibility matrix since these represent prohibited activities rather than legitimate spatial uses.

- Navigational aids were considered compatible with all activities due to their essential role in maritime safety.
- Liquid sewage disposal was identified as incompatible with marine ecosystem protection and participants recommended removing it from the matrix.
- Sargassum containment booms should not be placed in seagrass habitats due to ecological sensitivity.

Analytical Summary of Compatibility Adjustments

Compatibility Category	Number of Interactions	Interpretation
Compatible	11	Activities can coexist with minimal operational conflict.
Moderately Compatible	32	Activities may coexist but require monitoring or spatial management.
Incompatible	5	Activities cannot occur together due to environmental or operational conflict.
No Spatial Overlap	13	Activities occur in different geographic zones.

6.4 Maritime Administration – Findings

Lead Facilitator: Delwin Guevara

Detailed Findings Table

Dot / Interaction	Recommended Score	Rationale
1 Nautical tourism – Ports & Harbour Operations	Compatible	Tourism vessels begin operations from ports and

		harbours for boarding and clearance.
2 Shipping – Ports & Harbour Operations	Moderately Compatible	Shipping overlaps with port activities but requires traffic coordination.
3 Dredging & Development – Ports	Compatible	Dredging is necessary for port maintenance and expansion.
4 Dredged Material Disposal	Moderately Compatible	Material may not be used immediately and requires management areas.
5 Sand & Gravel Mining	Moderately Compatible	Overlap depends on location between ports and harbour zones.
6 Sargassum Containment Boom	Moderately Compatible	Possible with proper spatial planning.
7 Sand & Beach Areas	Moderately Compatible	Requires management measures.
8 Interaction	Moderately Compatible	Operational overlap requires planning.
9 Interaction	Moderately Compatible	Requires coordination.
10 Interaction	Moderately Compatible	Requires monitoring and coordination.
11 Interaction	Compatible	Activities can coexist.
12 Interaction	Compatible	Activities can coexist.
13 Interaction	Incompatible	Operational conflict between activities.
14 Interaction	Compatible	Activities can coexist in port environments.

15 Interaction	Moderately Compatible	Requires operational coordination.
16 Water Taxi Interaction	Compatible	Water taxi services are common in port operations.
17 Interaction	Incompatible	Operational conflict between activities.
18 Interaction	Compatible	Activities can coexist with coordination.
19 Interaction	Moderately Compatible	Requires management oversight.
20 Interaction	Incompatible	Maritime security requires restricted zones.
21 Interaction	Incompatible	Security zones prevent overlap.
22 Interaction	Incompatible	Operational security conflict.
23 Interaction	Moderately Compatible	Enforcement may coexist with monitoring.
24 Restoration – Moorings	Moderately Compatible	Moorings may support restoration if managed.
25 Coral Reef – Moorings	Moderately Compatible	Requires careful management.
26 Turtle Nesting	No Spatial Overlap	Activities occur in separate areas.
27 Interaction	Incompatible	Navigational safety conflict.
28 Interaction	Compatible	Navigational aids support maritime safety.
29 Navigational Aids – Ports & Harbours	Compatible	Helps identify operational areas.

30 Interaction	Moderately Compatible	Designated disposal sites require management.
31 Interaction	Moderately Compatible	Same rationale as above.
32 Interaction	Incompatible	Conflict with shipping lanes.
33 Interaction	Incompatible	Activities cannot coexist safely.
34 Interaction	Moderately Compatible	Requires spatial management.
35 Interaction	Incompatible	Operational conflict.
36 Interaction	Incompatible	Activities cannot occur together safely.
37 Interaction	Moderately Compatible	Requires operational management.
38 Interaction	No Spatial Overlap	Activities occur in separate zones.
39 Interaction	Moderately Compatible	Requires monitoring.
40 Overwater Construction	Moderately Compatible	Requires planning and coordination.
41 Ports & Harbour Dredging	Moderately Compatible	Requires environmental and operational management.

Table 6.4: Maritime Administration Sector Compatibility Matrix Review – Raw Input

Special Notes and Sector Recommendations

- Participants recommended separating ports and harbour operations when evaluating compatibility with other activities due to differing operational contexts.

- Maritime security operations may require exclusion zones where most other activities are incompatible, while enforcement operations may coexist with other uses under monitoring.
- Sewage discharge regulations allow limited releases beyond three nautical miles from land under international conventions and require monitoring and reporting.

Analytical Summary of Compatibility Adjustments

Compatibility Category	Number of Interactions	Interpretation
Compatible	9	Activities can coexist with minimal operational conflict.
Moderately Compatible	18	Activities may coexist but require monitoring or spatial management.
Incompatible	10	Activities cannot occur together due to safety or operational conflicts.
No Spatial Overlap	2	Activities occur in separate geographic zones.

6.5 Marine & Coastal Ecosystems – Raw Findings

Lead Facilitator: Janel McNab

Detailed Findings Table

Dot / Interaction	Recommended Score	Rationale
A12 Sand beaches & sandbars – Flat sport fishing	Moderately Compatible	Fishing may occur near beach habitats but could disturb shoreline ecosystems.
J12 Marine protected areas – Flat sport fishing	Moderately Compatible	Fishing pressure near protected zones requires management measures.

K17 Science & research – Snorkeling / scuba diving	Moderately Compatible	Research activities may overlap with dive tourism areas and require coordination.
K19 Science & research – Animal watching	Moderately Compatible	Research activities may occur in wildlife viewing areas but require careful management.
E19 Nesting & congregation areas – Animal watching	Moderately Compatible	Wildlife tourism may disturb breeding or nesting species if unmanaged.
F19 Species migration routes – Animal watching	Moderately Compatible	Tourism vessels may intersect migration pathways.
G19 Mangrove ecosystems – Animal watching	Moderately Compatible	Boat activity may affect mangrove habitats.
I19 Mega marine fauna – Animal watching	Moderately Compatible	Wildlife observation requires guidelines to prevent disturbance.
L19 Turtle nesting – Animal watching	Moderately Compatible	Observation activities may disturb nesting turtles.
M14 Seamounts – Aquarium trade	No Spatial Overlap	Seamount ecosystems occur offshore and outside the operational area of aquarium trade.
L21 Turtle nesting – Water sports	No Spatial Overlap	Water sports typically occur offshore and do not overlap with nesting beaches.
L22 Turtle nesting – Nautical tourism	No Spatial Overlap	Nautical tourism generally occurs away from turtle nesting areas.
H21 Coral reefs – Water sports	No Spatial Overlap	Recreation zones and coral reef habitats typically occur in different locations.

H22 Coral reefs – Nautical tourism	No Spatial Overlap	Nautical tourism activities are generally located away from reef structures.
N21 Sandy muddy seafloor – Water sports	No Spatial Overlap	Water sports areas rarely occur in deeper soft-bottom habitats.
N22 Sandy muddy seafloor – Nautical tourism	No Spatial Overlap	Soft-bottom seabed habitats are outside the main operational areas of tourism vessels.

Table 6.5: Marine & Coastal Ecosystems Sector Compatibility Matrix Review – Raw Input

Special Notes and Sector Recommendations

- Ecosystem features such as coral reefs, mangroves, and turtle nesting beaches were identified as highly sensitive habitats requiring precautionary management.
- Participants emphasized that wildlife tourism activities should be carefully monitored to avoid disturbance to species such as dolphins, manatees, and turtles.
- The activity previously labeled 'Snorkeling / scuba diving & fishing' was clarified to remove fishing to avoid duplication with fisheries sector activities.

Research activities were generally considered compatible across sectors provided that safety protocols and environmental safeguards are followed.

Analytical Summary of Compatibility Adjustments

Compatibility Category	Number of Interactions	Interpretation
Compatible	1	Activities can coexist with minimal operational conflict.
Moderately Compatible	9	Activities may coexist but require monitoring or spatial management.

No Spatial Overlap	7	Activities occur in different ecological or geographic zones.

ANNEX 7 Future Scenario Zonation Exercise – Raw Data

Poor Governance & Low Impact from Climate Change

Description:

- Climate Change impacts on industries are low
- Poor management and enforcement
- Increased exploitation of resources
- Increased habitat loss

"While CC impact on industries is low the overwhelming effects of poor governance contributes to all in quality of life, economic growth & poverty."

- Increased conflict and competition among users
- High level of pollution
- Marginalization of traditional (fishing) and emerging sectors (mariculture)
- Reduction of safety and security in maritime space.
- Climate change impacts may be low in Belize with poor governance

  means poor leadership, life is getting harder, there is no money circulating and more people are falling into poverty.

Poor Governance & High Impact from Climate Change

Description:

- Feedback cycle of increasing vulnerability + high negative impact
- Increased storm damage leads to increased economic pressures
- Social unrest and involvement (social inequality, corruption – a few benefit, many suffer)
- Resource exploitation (reef depleted, fisheries depleted, cleared mangroves, loss of ecosystem function)

- Unregulated, poor investment
- Loss of major industry (tourism, fisheries)
- Jobs lost

Hurricane Covid Cat 5+

Imagine fi we Belize, where COVID-19 returns with drastic impacts of a Category 5 hurricane; in this bleak future, Belize experiences alarming rates of corruption, crime due to civil unrest, loss of investment in climate-resilient infrastmeture which will ultimately create economic instability. Our people will lose their jobs. And die!

Good Governance & Low Impact from Climate Change

Description:

- Tourism booming
- Resulting in increased capital investments in social programs and management of natural resources.
- Sustainable growth and development of Belize's Blue economy.
- Improved natural marine resources management, supporting sustainable fisheries and tourism livelihoods.

"In mari floremus"

Good governance results in sustainable and climate resilient resources. Our oceans are healthy, providing food, income security, and improved quality of life.

Belize shows the world that even a small country can grow strong and happy if it takes care of its people and its environment.

Good Governance & High Impact from Climate Change

- High Impact from Climate Change:
- Increase in frequency and intensity of storms & disasters
- Sea Surface Temperature increase
- Changing weather pattern (precipitation)
- Habitat loss-biodiversity loss
- Ecosystem degradation
- Impact of coastal communities may shift economic & social situations
- More fires leading to more toxic gases
- Species migration-shift in access to certain commercial species

- Negative impacts on human health leading to strain on the health system.

"Building a climate resilient Belize through strong governance, transparent institutions, and science-based planning that drives sustainable economic growth to achieve high-impact outcomes to secure natural capital and vulnerable communities"

Urgency triggers responsible planning to be resilient & create opportunities to meet meaningful development goals and protect the vulnerable.

ANNEX 8 Development of SMART Targets for Priority Criteria Raw Data

Protection of Cultural Heritage Significant Areas

The group emphasized the importance of improving identification, documentation, and protection of cultural heritage sites within marine and coastal environments. Their discussion focused on strengthening the evidence base for heritage protection and ensuring that significant sites are properly categorized and managed.

Key Targets Identified

1. Validation of Existing Data
Participants highlighted the need to review and validate existing spatial and archaeological datasets, including LiDAR data, to confirm the accuracy of recorded cultural heritage locations.

2. Collection of New Data to Address Gaps
The group noted that significant gaps remain in the available information. They recommended additional data collection efforts, particularly through LiDAR and other survey technologies, to identify previously undocumented sites and fill existing knowledge gaps.

3. Classification of Cultural Heritage Sites
The group proposed classifying heritage sites into three main categories to guide protection and management strategies:

- Shipwrecks
  Approximately 63 wrecks are known from literature, but only two have been mapped. This highlights a major need for mapping and documentation.

- Historic Settlements and Cemeteries
  These sites represent important cultural and historical records and require targeted documentation and protection measures.

- Prehistoric Sites and Caves
  Examples include Paynes Creek and Caye Caulker's Giant Cave. The group suggested establishing a 500-meter management zone around discovered sites, recognizing that underwater artifacts may disperse due to water currents.

Key Management Consideration

The group emphasized that many cultural heritage sites may exist outside of current protected areas. For these locations, preservation measures and specific management conditions should still be applied, even when they fall outside designated protection zones.

Vulnerable Marine and Coastal Sites

Group 5 identified a range of vulnerable marine and coastal habitats and geological features that require targeted protection due to their ecological importance, sensitivity, and role in supporting biodiversity. Participants emphasized the need for stronger protection measures, improved baseline data, and adaptive management approaches.

Vulnerable Sites Identified

The group highlighted several ecosystem types and natural features that are particularly vulnerable and require enhanced protection measures:

- Spawning Aggregation Sites (SPAGs)
- Nursery habitats for vulnerable species, particularly conch, including:
  - Mangroves
  - Nearshore seagrass beds and flats
- Faroes and other geological formations, including underwater caves
- Seamounts, including features such as the Blue Hole
- Estuaries, marshes, and peatland systems
- Sandbars

- Migratory routes used by marine species
- Coastal nesting sites, particularly beach and shoreline areas
- Cenotes
- Freshwater springs, including sites within the Caye Caulker Biosphere Reserve System (CBWS)
- Stromatolite formations, including those located in English Caye Channel within CBWS

Participants also noted the importance of establishing baseline data for many of these systems to support effective monitoring and management.

Key Targets Proposed

1. Protection of Spawning Aggregation Sites (SPAGs)
Participants proposed 100% protection of SPAG sites, with dynamic or adaptive management approaches to allow protection measures to respond to changing ecological conditions.

2. Protection of Mangrove Systems
The group emphasized the importance of mangrove fringing habitats, recommending:

- Full protection of mangrove ecosystems
- Enforcement of a 66-foot protective buffer zone

3. Protection of Underwater Cave Systems
Sites such as underwater caves near Caye Caulker were identified as highly sensitive environments. The group recommended 100% protection, primarily for research purposes.

4. Protection of Seamounts
Participants recommended full protection of seamount ecosystems, recognizing their ecological importance and vulnerability.

5. Coral Reef Protection Targets
The group discussed increasing coral reef protection levels, noting possible targets ranging from 7% to 15% or potentially up to 20% coverage, though further analysis and baseline data would be needed.

6. Seagrass Protection
Seagrass ecosystems were recognized as critical habitats supporting fisheries and biodiversity, though specific protection targets would require additional assessment.

7. Protection of Flats Ecosystems
Participants proposed a 40% protection target for flats habitats, given their importance as nursery areas and feeding grounds for marine species.

Vulnerable Marine and Coastal Sites

This group identified a range of ecologically sensitive and vulnerable marine and coastal areas that require enhanced protection and management. Participants emphasized that many of these systems play critical roles in supporting biodiversity, fisheries productivity, and ecosystem resilience. The group also highlighted the need for improved baseline data and monitoring to guide future protection and management decisions.

Vulnerable Sites Identified

Participants identified several ecosystem types and geological features that require particular attention due to their ecological importance or vulnerability:

- Spawning Aggregation Sites (SPAGs)
- Nursery habitats for vulnerable species, particularly conch, including:
    - Mangrove ecosystems
    - Nearshore seagrass beds and flats
- Faroes and geological formations, including underwater cave systems
- Seamounts, including features such as the Blue Hole
- Estuaries, marshes, and peatlands
- Sandbars
- Marine migratory routes
- Coastal nesting sites, particularly beaches and shoreline habitats
- Cenotes
- Freshwater springs, including sites associated with the Caye Caulker Biosphere Reserve System (CBWS)
- Stromatolite formations, including areas within English Caye Channel (CBWS)

The group also noted the importance of establishing baseline ecological data for many of these areas to support long-term monitoring and management.

Key Targets Proposed

1. Protection of Spawning Aggregation Sites (SPAGs)
The group recommended 100% protection of SPAG sites, supported by dynamic or adaptive

management approaches that allow protection measures to respond to ecological changes over time.

2. Mangrove Protection
Participants highlighted the importance of fringing mangrove ecosystems, recommending:

- Full protection of mangrove areas
- Enforcement of a 66-foot buffer zone to prevent encroachment and habitat degradation.

3. Protection of Underwater Cave Systems
Sensitive cave systems, including those near Caye Caulker, should receive 100% protection, with access primarily limited to research purposes.

4. Protection of Seamounts
Seamount ecosystems were identified as important ecological features that should receive full protection due to their biodiversity value.

5. Coral Reef Protection Targets
Participants discussed the possibility of increasing coral reef protection levels, noting potential targets ranging from 7% to 15%, or possibly up to 20%, pending further data and analysis.

6. Seagrass Ecosystems
Seagrass beds were recognized as essential habitats supporting fisheries and biodiversity. Participants noted the importance of improving mapping and protection of these areas.

7. Flats Ecosystems
The group proposed a 40% protection target for flat habitats, recognizing their importance as feeding and nursery areas for marine species.

Representation of Ecosystem Diversity

This group focused on ensuring that marine spatial planning adequately represents the full diversity of marine ecosystems and habitats. Participants highlighted that several important ecosystems are currently under-represented in conservation and management frameworks, and emphasized the need to consider both water column ecosystems and benthic habitats when defining protection and management strategies.

Key Ecosystems and Habitats Identified

Participants identified several habitats and ecological areas that require greater consideration in marine spatial planning:

1. Deep Benthic Habitats
The group noted the under-representation of deep benthic ecosystems, particularly those occurring at depths greater than approximately 2000 meters. These habitats remain poorly studied and require improved data and representation in planning processes.

2. Sand Flats
Expansive sand flat ecosystems, including both shallow and deeper areas, were identified as important habitats that require further consideration in conservation and spatial management.

3. Open Sea Ecosystems
Participants recommended that open sea areas be considered as integrated systems that include both the water column and benthic habitats. Important criteria for identifying and managing these areas may include:

- Depth gradients
- Migratory pathways for marine species

4. Back Reef Rubble and Sand Habitats
Back reef areas composed of rubble and sand substrates were identified as important ecological zones that support various marine species and ecological processes.

5. Seaweed Banks
Natural seaweed banks were highlighted as ecosystems of commercial and ecological value, indicating the need for improved recognition and management within spatial planning frameworks.

6. Nursery Habitats
Nursery areas were identified as critical habitats that support early life stages of marine species and contribute to fisheries productivity.

7. Foraging and Mating Grounds
Participants also highlighted the importance of protecting feeding and reproductive habitats, which are essential for sustaining marine populations and ecosystem health.

Key Consideration

The group emphasized that marine spatial planning should ensure balanced ecosystem representation, ensuring that protection and management measures capture both coastal and offshore ecosystems, including habitats that are currently underrepresented in

.