

With comments

**REGIONAL CONSULTANCY TO ASSESS THE
TRAINING NEEDS AND DEVELOP MPA
MANAGEMENT TRAINING MATERIALS THAT
PRIORITIZES MARINE SPATIAL PLANNING, BLUE
ECONOMY, AND ECOSYSTEMS-BASED FISHERIES
MANAGEMENT**

**CRFM Consultancy Report - MPA Management Training
Curriculum**

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EXECUTIVE SUMMARY

The curriculum is a professional development framework designed to bridge the gap between academic theory and the practical realities of managing Marine Protected Areas (MPAs). Its primary goal is to standardize and elevate marine resource management through a tiered, competency-based learning journey. The program focuses on six project countries: Barbados, Belize, Guyana, Jamaica, Saint Lucia, and Panama.

The curriculum consists of 27 modules organized into five thematic units. To ensure a logical progression, it follows a prerequisite tree structure. Tier 1 (Foundational) establishes a common language covering conservation literacy, the Blue Economy, and legal frameworks. Tier 2 (Technical and Theoretical) branches into specialized operational roles such as ecological and social monitoring, operations and compliance, and spatial and management planning. Tier 3 (Strategy and Evaluation) focuses on high-level synthesis, including sustainable financing, governance, and management effectiveness.

The training is architected to support three distinct career paths within the marine conservation sector: 1) The Field Practitioner, focused on ‘boots on the ground’ or ‘fins in the water’ skills like drone piloting, enforcement patrols, and site maintenance, 2) The Conservation Scientist, focused on rigorous data collection, biophysical and socioeconomic monitoring, and fisheries science and 3) The Manager and Policy Lead, focused on system-wide oversight, sustainable business models, and high-level strategy.

It is recommended that the delivery of the curriculum should employ a blended learning model to balance accessibility with practical mastery. It should therefore include online (asynchronous/synchronous) formats to cater to modules which are information-heavy and those requiring Socratic dialogue and debate. It should also utilise a hybrid format which combines online theory with mandatory field practice for technical skills like biophysical monitoring and enforcement. Rather than simple completion, the curriculum uses a multimodal assessment framework, including scenario-based exams, ‘live case’ simulations, and skill-to-standard checklists verified in the field. Professionalization is further supported by a suggested certification system to formalize these competencies regionally.

Successful implementation of the curriculum will rely on leveraging existing regional legacies and strategic partnerships with a network of regional partners. These will include, but are not limited to, those providing academic and scientific support (such as UWI), social and governance support (e.g. CANARI, SocMon Caribbean and IUCN-ORMACC), policy and economic alignment support (OECS and CBD) and the operational support (CaMPAM and MPA Connect).

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Disclaimer:

The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the Caribbean Regional Fisheries Mechanism and its funding sources.

ACRONYMS

AGRRA	Atlantic and Gulf Rapid Reef Assessment
BE-CLME+	Promoting National Blue Economy Priorities Through Marine Spatial Planning in the Caribbean Large Marine Ecosystem Plus
CaMPAM	Caribbean Marine Protected Areas Management Network and Forum
CANARI	Caribbean Natural Resources Institute
CBO	Community-Based Organization
CDB	Caribbean Development Bank
CEOBE	Centre for Excellence for Oceanography and the Blue Economy at UWI Five Islands (Antigua and Barbuda)
CERMES	Centre for Resource Management and Environmental Studies
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CRFM	Caribbean Regional Fisheries Mechanism
CXC	Caribbean Examinations Council
EbM	Ecosystem-based Management
ECOP	Early Career Ocean Professionals
GCRMN	Global Coral Reef Monitoring Network
GIS	Geographic Information System
GPS	Global Positioning System
IOCARIBE	Intergovernmental Oceanographic Commission of UNESCO Sub-Commission for the Caribbean and Adjacent Regions
IUCN	International Union for Conservation of Nature
MCS	Monitoring, Control, and Surveillance
METT	Management Effectiveness Tracking Tool
MPAs	Marine Protected Areas
MSP	Marine Spatial Planning
NGOs	Non-Governmental Organizations
OECM	Other Effective Area-based Conservation Measure
OECS	Organisation of Eastern Caribbean States
PLI	Professional Learning Institute
PROCARIBE+	Protect and Restore Ocean Capital and Blue Economies
SMMA	Soufrière Marine Management Area.
SocMon	Socioeconomic Monitoring for Coastal Management
SPA-W-RAC	Specially Protected Areas and Wildlife - Regional Activity Centre
SPR	Spawning Potential Ratio.
SRC	The Shridath Ramphal Centre at UWI Cave Hill (Barbados)
UNDP	United Nations Development Programme
UNEP-CEP	United Nations Environment Programme - Caribbean Environment Programme
UNOPS	United Nations Office for Project Services
UWI	The University of the West Indies
VLE	Virtual Learning Environment
VMS	Vessel Monitoring System

1 INTRODUCTION

The effective and equitable management of marine protected areas (MPAs) requires a range of competencies across various levels (e.g. MPA directors, managers and staff, NGOs, CBOs, private sector, academia etc.), to facilitate effective planning, implementation and evaluation. Effective management of MPAs ultimately requires individual and institutional capacity development and the utilisation of professionalisation as a framework (i.e. the development of competent professionals).

The Promoting National Blue Economy Priorities Through Marine Spatial Planning in the Caribbean Large Marine Ecosystem Plus (BE-CLME+) Project, being executed by the Caribbean Regional Fisheries Mechanism (CRFM), is an existing regional initiative aimed at promoting blue economy development in the Caribbean. It is through the BE-CLME+ project that the current consultancy to develop an MPA management training curriculum was undertaken by The University of the West Indies Centre for Resource Management and Environmental Studies (UWI-CERMES), with a focus on six project countries (Barbados, Belize, Guyana, Jamaica, Saint Lucia, and Panama).

The primary objective was to develop an MPA management training curriculum with associated training materials which do not duplicate but complement existing materials. The development of the curriculum was guided by a training and capacity needs assessment which involved a thorough desk review and stakeholder engagement via an online survey and country focus group discussions. Subsequently, developed module outlines were reviewed by thematic experts (See Annex I) to ensure fit-for purpose.

2 CURRICULUM OVERVIEW

This curriculum serves as a comprehensive professional development framework designed to bridge the gap between academic theory and the practical realities of managing Marine Protected Areas (MPAs). As global conservation efforts move toward the ‘30 by 30’ goal (protecting 30% of the world’s oceans by 2030), there is an urgent need for a workforce that is not only scientifically literate but also operationally skilled and strategically minded.

2.1 Curriculum

The mission of this program is to standardize and elevate the management of marine resources through a tiered, competency-based learning journey.

2.2 Curriculum

The MPA management training curriculum is designed in a modular format, thus allowing learners to focus on areas pertinent to their field of work or areas of interest. The curriculum is divided into 27 modules spread across five units (Table 1), with the units and modules representing the wider range of capacities needed by organisations to support or achieve effective MPA management. It must be noted

that module outlines (see Annexes II - VI) and detailed modules were only developed for areas emerging as high priority among the project countries (due to time limitations), based on the results of the stakeholder engagement (i.e. the administered survey and the country group discussions).

Table 1 Units and respective modules comprising the MPA training curriculum

Unit	Module
1 - Introduction to Conservation	1.1 Conservation Literacy
	1.2 Introduction to MPAs and OECMs
	1.3 Introduction to Conservation Frameworks
	1.4 Introduction to the Blue Economy
2 - MPA Design and Planning	2.1 MPA Ecological Design
	2.2 Introduction to Marine Spatial Planning (MSP)
	2.3 Introduction to Management Planning
	2.4 Introduction to Sustainable Financing
	2.5 Sustainable Tourism*
	2.6 Alternative Livelihoods Planning*
3 – Governance and Management	3.1 MPA Governance
	3.2 Ecosystem-based Management (EbM)
	3.3 Fisheries Biology and Management
	3.4 Enforcement and Compliance
	3.5 On-site Management*
	3.6 Organizational Management*
4 - Monitoring and Evaluation and Learning	4.1 Biophysical Monitoring
	4.2 Protected Area Management Effectiveness Evaluation
	4.3 Socioeconomic Monitoring
	4.4 Economic Valuation*
	4.5 Reporting*
	4.6 Data and Information Management*
	4.7 Useful Technologies*
5 - Engagement	5.1 Stakeholder Engagement
	5.2 Conflict Resolution
	5.3 Partnerships and Coordination*
	5.4 Public Outreach and Education*

*Areas not emerging as high priority and thus have not had module development due to time limitations.

After the outlining of the units and their respective modules, a module classification was undertaken. This classification of modules separates the building blocks (Foundational) from the applied skills (Technical and Theoretical) and the high-level oversight (Strategy and Evaluation).

1. Foundational

These modules provide the core vocabulary and the legal/ecological ground rules. They are the essential prerequisites for the rest of the curriculum.

- 1.1 Conservation Literacy
- 1.2 Introduction to MPAs and OECMs
- 1.3 Introduction to Conservation Frameworks
- 1.4 Introduction to the Blue Economy

2. Technical and Theoretical

These modules cover the ‘how-to’ of MPA operations. They include scientific protocols, operational tactics, and the theoretical underpinnings of specific management sectors.

- 2.1 MPA Ecological Design
- 2.2 Introduction to Marine Spatial Planning (MSP)
- 2.3 Introduction to Management Planning
- 2.6 Alternative Livelihoods Planning
- 3.2 Ecosystem-based Management (EbM)
- 3.3 Fisheries Biology and Management
- 3.4 Enforcement and Compliance
- 3.5 On-site Management
- 3.6 Organizational Management
- 4.1 Biophysical Monitoring
- 4.3 Socioeconomic Monitoring
- 4.5 Reporting
- 4.6 Data and Information Management
- 4.7 Useful Technologies
- 5.1 Stakeholder Engagement
- 5.2 Conflict Resolution
- 5.4 Public Outreach and Education

3. Strategy and Evaluation

These represent the ‘Synthesis’ level. They require the learner to weigh competing data points to make long-term strategic decisions or audit the success of the entire system.

- 2.4 Introduction to Sustainable Financing
- 2.5 Sustainable Tourism
- 3.1 MPA Governance
- 4.2 Protected Area Management Effectiveness Evaluation
- 4.4 Economic Valuation
- 5.3 Partnerships and Coordination

This program is architected to support three distinct professional personas within the marine conservation sector:

1. The Field Practitioner (The Specialists)

- Roles: Park Rangers, Enforcement Officers, and Field Technicians.
- Focus: Mastery of ‘Boots on the Ground’ or ‘Fins in the Water’ skills. They will focus on Pillar B (Operations and Compliance), learning how to pilot drones, conduct enforcement patrols, and maintain site infrastructure while managing local community conflicts.

2. The Conservation Scientist (The Researchers)

- Roles: Marine Biologists, Data Managers, and Monitoring Officers.
- Focus: Rigorous data collection and analysis. They will lean into Pillar A (Monitoring), specializing in biophysical and socioeconomic survey methodologies, fisheries science, and digital data hygiene to ensure the MPA’s success is measurable.

3. The Manager and Policy Lead (The Architects)

- Roles: MPA Directors, Government Officials, and NGO Leads.
- Focus: System-wide oversight and strategy. They utilize Tier 3 (Strategy and Evaluation) to design sustainable business models, navigate complex governance structures, and evaluate the overall effectiveness of the management cycle.

The suggested path is structured to ensure that learners progress logically from basic concepts to complex decision-making. It ensures that technical and strategy-based modules are supported by the necessary foundational knowledge. The suggested path is designed as a prerequisite tree, where learners should complete the Tier 1 (foundational) modules before progressing to the more complex Tier 2 (technical and theoretical) and/or Tier 3 (strategy and evaluation) modules (as outlined below).

Tier 1: The Core Foundation

Should be completed first to establish the ‘Common Language’.

- 1.1 Conservation Literacy
- 1.2 Introduction to MPAs and OECMs
- 1.3 Introduction to Conservation Frameworks
- 1.4 Introduction to the Blue Economy

Tier 2: Specialized Technical & Theoretical Pillars

Once Tier 1 is complete, learners branch into specific operational roles.

Pillar A: Ecological and Social Monitoring

- 3.3 Fisheries Biology and Management
- 4.1 Biophysical Monitoring
- 4.3 Socioeconomic Monitoring
- 4.6 Data Management
- 4.7 Useful Technologies

Pillar B: Operations and Compliance

- 2.6 Alternative Livelihoods
- 3.4 Enforcement and Compliance
- 3.5 On-site Management
- 3.6 Organizational Management
- 4.6 Data and Information Management
- 4.7 Useful Technologies
- 5.1 Stakeholder Engagement
- 5.2 Conflict Resolution
- 5.4 Public Outreach and Education

Pillar C: Spatial and Management Planning

- 2.1 MPA Ecological Design
- 2.2 Introduction to Marine Spatial Planning (MSP)
- 2.3 Introduction to Management Planning
- 3.2 Ecosystem-based Management (EbM)

Tier 3: Advanced Strategy & Evaluation

Synthesis of all data and social dynamics to ensure long-term sustainability.

- 2.4 Introduction to Sustainable Financing
- 2.5 Sustainable Tourism
- 3.1 MPA Governance
- 4.2 Protected Area Management Effectiveness Evaluation
- 4.4 Economic Valuation
- 5.3 Partnerships and Coordination

The current pathway balances academic rigor with operational reality. It ensures that practitioners at all levels share a ‘common language’ before specializing in technical roles or high-level oversight. As such, some modules are recognised as being cross-cutting modules and thus are duplicated to ensure that no matter which ‘career path’ a learner chooses (see below), they aren't missing the essential tools of the trade.

Regardless of their ultimate role, every learner is encouraged to begin with Tier 1 (the core foundation). This ensures that a Ranger, a Biologist, and a director all share a common language regarding the Blue Economy, legal frameworks, and conservation literacy. From this foundation, learners branch into specialized Pillars (Tier 2) before culminating in the Strategy tier (Tier 3) for those moving into leadership.

- Tier 1: Everyone
- Tier 2 (Pillar A): The Scientist / Researcher
- Tier 2 (Pillar B): The Site Manager / Head Ranger
- Tier 2 (Pillar C): The Planner / Policy Officer
- Tier 3: The Executive Director / Regional Coordinator

The overall learning objectives for the MPA management training curriculum are for learners to be able to demonstrate expert knowledge and practical skills across the fundamental components of conservation, planning, governance, management, monitoring, and engagement in marine protected areas. The curriculum is designed to move a learner from basic comprehension to the point where they can successfully navigate the complexities of real-world marine conservation.

With respect to the outlined tiers, the learning objectives are as follows:

Tier 1

- Interpret the legal and ecological ground rules that define MPAs and OECMs globally.
- Articulate the relationship between ocean health and the Blue Economy, framing conservation as a driver of sustainable development.
- Identify the multi-dimensional threats to marine ecosystems, from localized overfishing to global climate change.

Tier 2

- Deploy scientific protocols for biophysical and socioeconomic monitoring to generate high-quality, actionable data.
- Implement spatial planning and management cycles (MSP and EbM) to reduce user conflict and ensure ecological connectivity.
- Operate critical conservation infrastructure and technologies, ranging from physical mooring systems to digital surveillance tools like Vessel Monitoring Systems (VMS) and drones.
- Manage frontline social dynamics through effective stakeholder engagement and conflict resolution.

Tier 3

- Design diverse and resilient financing models that move the MPA toward long-term financial independence.
- Audit the success of the entire management system through formal effectiveness evaluations, triggering the Adaptive Management Loop.

- Influence high-level policy by quantifying ecosystem services and navigating complex governance and partnership structures.

2.6 *Suggested delivery*

The implementation of this curriculum requires a comprehensive delivery strategy, such as a Blended Learning Model. The recommended delivery modes include online (asynchronous¹ or synchronous²) and hybrid (online and in-person) formats. Modules which are ‘information heavy’ can primarily utilise reading, video lectures, and objective testing. These modules do not require a specific geographic location to master core concepts and thus can be delivered in an online format (Table 2). Other modules require a ‘boots-on-the-ground’ or ‘fins-in-the-water’ experience and thus should be delivered in a hybrid format. The theory is taught online, but the fieldwork is mandatory to prove competency (Table 2).

Table 2 Suggested delivery mode for the curriculum modules

Delivery mode	Module	Rationale
Online (asynchronous)*	• 1.1 Conservation Literacy • 1.2 Introduction to MPAs • 1.3 Conservation Frameworks • 1.4 Introduction to the Blue Economy • 3.2 Ecosystem-based Management (EbM)	Learners will need to absorb definitions and history. Asynchronous delivery will allow them to re-watch complex sections at their own pace.

¹ Self-paced learning with no set meeting times.

² Real-time online classes held via video conferencing at scheduled times

Delivery mode	Module	Rationale
	• 3.6 Organisational Management • 4.6 Data and Information Management**	
Online (synchronous)	• 2.4 Introduction to Sustainable Financing • 2.5 Sustainable Tourism • 2.6 Alternative Livelihoods Planning • 3.1 MPA Governance • 4.4 Economic Valuation • 4.5 Reporting • 5.2 Conflict Resolution • 5.3 Partnerships and Coordination • 5.4 Public Outreach	These modules require Socratic dialogue.
Hybrid	• 2.1 MPA Ecological Design • 2.2 Introduction to Marine Spatial Planning • 2.3 Introduction to Management Planning • 3.3 Fisheries Biology and Management • 3.4 Enforcement and Compliance • 3.5 On-site Management • 4.1 Biophysical monitoring • 4.2 Protected Area Management Effectiveness Evaluation • 4.3 Socioeconomic Monitoring • 4.7 Useful Technologies • 5.1 Stakeholder Engagement	Combines remote theory with ‘Boots on the Ground’ or ‘fins-in-the-water’ practice.

*Should include a Discussion Board to facilitate any required assistance and/or discussions.

** Should include a follow-along Lab approach³.

³ A training method where participants replicate a demonstrated procedure, experiment, or simulation in real-time or alongside an instructor, tutorial, or guide.

To assess a curriculum that spans from basic literacy to high-level strategy, the assessment type must cater to the delivery strategy employed (i.e. asynchronous, synchronous or hybrid). A one-size-fits-all approach will fail to measure the ‘soft skills’ of leadership or the ‘hard skills’ of field operations. The most effective assessment strategy therefore is a Multimodal Assessment Framework that prioritizes mastery over mere completion (Table 3).

Table 3. Assessment summary

Delivery Mode	Primary Assessment Method	Logic & Goal	Mastery Evidence (The Output)
Asynchronous	Knowledge check	Ensures knowledge retention and readiness for the next tier.	Quizzes + scenario-based exam
Synchronous	Performance-Based Synthesis	Evaluates real-time reasoning, negotiation, and leadership.	The Defence Pitch (e.g., a sustainable finance plan) or Role-play.
Hybrid	Skill-to-Standard Checklist	Verifies physical proficiency and protocol adherence in the field.	Quizzes, bridge activities, field Log + instructor Sign-off on specific technical tasks.

2.7.1 Asynchronous

To maintain the integrity of a ‘prerequisite tree’, the assessment for asynchronous modules must go beyond simple completion. Since these modules provide the common language for the rest of the curriculum, the assessment needs to prove conceptual mastery and readiness for application.

Gate 1: Progressive Knowledge Checks (Micro-Quizzes)

Instead of one giant exam at the end, knowledge checks are included after every section.

- Format: Multiple-choice, drag-and-drop matching, or "Identify the Error" in a scenario.
- Requirement: 100% score required to move to the next lesson.

- Goal: To prevent passive scrolling and ensure immediate retention of core definitions.

Gate 2: The Scenario-Based Summative Exam

Once the module is finished, the learner takes a final exam that focuses on applied logic rather than rote memorization.

- Format: For example, for 1.3 (Frameworks): Instead of asking ‘What is CITES?’, provide a scenario: ‘A vessel is found with X species; which international framework governs this seizure?’
- Requirement: 80% passing grade.
- Goal: To ensure the learner can identify which tool (law, theory, or category) applies to a real-world situation.

2.7.2 Synchronous

To assess synchronous modules effectively, there needs to be a movement away from simply paper-and-pencil testing. Since these modules are built on Socratic dialogue and high-level synthesis, the assessment must also evaluate the learner's ability to reason, negotiate, and defend a position. The best approach includes progressive knowledge checks (as outlined above), combined with a Performance-Based Assessment model using specific techniques such as:

1 The ‘Live Case’ Simulation

Instead of a final exam, learners are presented with a complex, ‘messy’ real-world scenario that has no single correct answer.

- How it works: In 5.2 Conflict Resolution, for example, the instructor plays a hostile stakeholder (e.g., an angry fisherman or a resort developer). The learner must facilitate a 10-minute negotiation.
- Assessment Criteria: Use a rubric focusing on active listening, de-escalation tactics, and the ability to reach a "win-win" compromise.
- Module Fit: 5.2 (Conflict), 5.1 (Stakeholder Engagement) and 5.4 (Public Outreach).

2 The ‘Defence’ Presentation

This mirrors a professional ministerial briefing. It forces the learner to synthesize data into a persuasive argument.

- How it works: For 4.4 Economic Valuation or 2.4 Sustainable Financing, the learner must present a 5-minute "Pitch" to a mock Board of Directors or a Minister. They must justify why a specific financial model (e.g., a blue bond or a tourism levy) is the right choice for their MPA.
- Assessment Criteria: Clarity of data, ability to handle tough questions from the panel, and logical alignment with Governance (3.1) structures.
- Module Fit: 2.4, 2.5, 3.1, 4.4.

3 Peer-Review and Facilitation

In leadership-heavy modules, being able to critique others' work is as important as doing your own.

- How it works: During 4.5 Reporting or 5.3 Partnerships, students are paired up. One student presents a partnership strategy, and the other must conduct a "Critical Review" using a standardized audit tool.
- Assessment Criteria: The quality of the feedback provided by the reviewer is what is being graded. This proves they understand the "Standard of Excellence" for that module.
- Module Fit: 4.5, 5.3, 4.2 (Protected Area Management Effectiveness Evaluation).

4 The Socratic Grading Rubric

For synchronous sessions, it is helpful to grade participation quality throughout the module. This is often called a Socratic Score:

- Exemplary: Learner builds on others' ideas, cites Tier 1 and/or 2 data, and asks 'why' or 'what if' questions.
- Proficient: Learner answers questions accurately and participates in all simulations.
- Developing: Learner is present but rarely initiates dialogue or struggles to link theory to the live case.

2.7.3 Hybrid

Assessing hybrid modules requires a split approach, where it is verified that the learner has mastered the digital theory (using a combination of assessment methods previously highlighted for asynchronous and synchronous formats) before the field component, and then evaluated on their practical proficiency in the field. The most effective method is a Skill-to-Standard Checklist paired with a Field Log. This ensures that the 'boots on the ground' of 'fins in the water' time is treated as a professional practicum rather than just a field trip.

With respect to the hybrid modules, to ensure that the digital theory is effectively linked to the physical field experience, bridge activities can be utilised. These can consist of specific tasks the learner must complete online that they then bring with them to the field. These activities will help to ensure accountability, maximize field time and builds a professional portfolio for the learner. Examples of bridge activities for the hybrid modules are provided in (Table 4).

Table 4 Examples of bridge activities to link the online to the field components

Module	The Online Task (Asynchronous)	The Field/Lab Application (Practicum)
2.1 MPA Ecological Design	Perform a desktop gap analysis of a designated area using existing ecological data.	Use the desktop analysis to defend a proposed boundary extension in a group design session.
2.2 Introduction to Marine Spatial Planning (MSP)	Complete a digitized stakeholder mapping exercise and identify overlapping use zones.	Participate in a live Zoning Negotiation simulation using the identified conflict zones.
2.3 Introduction to Management Planning	Draft a Situation Model (threats/drivers) for a specific site based on provided context.	Refine the model with local stakeholders and draft the first three steps of the Action Plan.
3.3 Fisheries Biology and Management	Review life-history data for a target species and calculate a mock Spawning Potential Ratio (SPR).	Conduct a market or landing site survey to compare real-world catch sizes against the theoretical SPR.
3.4 Enforcement and Compliance	Pass a digital quiz on the Legal Rights of Rangers and evidence chain-of-custody protocols.	Participate in a Mock Boarding or Crime Scene exercise where evidence must be secured and logged.
3.5 On-site Management	Inventory a virtual equipment list and schedule a 12-month preventative maintenance calendar.	Conduct a physical "Site Audit" of a facility or mooring field and identify high-priority repairs.

Module	The Online Task (Asynchronous)	The Field/Lab Application (Practicum)
4.1 Biophysical Monitoring	Pass a species/habitat identification photo-test (e.g., coral health or fish species).	Execute a live underwater or coastal transect and compare data variability within the group.
4.2 Protected Area Management Effectiveness Evaluation	Review a site's past 3 years of monitoring data and management logs.	Conduct a Management Effectiveness Tracking Tool (METT) audit with the site manager.
4.3 Socioeconomic Monitoring	Design a 10-question survey instrument targeted at a specific stakeholder group (e.g., tour operators).	Pilot the survey with a real community member and analyze the refusal or bias challenges.
4.7 Useful Technologies	Complete a flight simulator module (for drones) or a data-entry tutorial (for GIS/VMS).	Pilot a drone for a coastal survey or use a handheld GPS to ground-truth a specific coordinate.
5.1 Stakeholder Engagement	Analyze a provided case study and identify the Primary, Secondary, and Veto stakeholders.	Facilitate a 15-minute mock stakeholder focus group and receive peer/instructor feedback.

Before being allowed into the field, the learner must submit their Bridge Activity.

- The Check: An instructor reviewed 'Stop/Go' point.
- Example for 5.1 (Biophysical Monitoring): The student must pass a Species Identification Quiz with a 90% score.
- Logic: You cannot teach someone how to lay a transect if they can't tell a Grouper from a Snapper yet.

During the practicum, the instructor uses a Standardized Proficiency Rubric, which isn't a written test but a 'show me' assessment.

- The Check: The instructor observes the student performing a specific task and checks off their level of mastery.
- Example for 3.4 (Enforcement and Compliance): The student is graded on their ability to perform a 'Mock Boarding' while maintaining the chain of custody for evidence.

In addition to the above, the learner would be required to maintain a Field Log.

- The Output: A digital or physical binder containing their bridge activity, their raw field data, and their instructor-signed check-off sheets.
- The Value: This becomes a Career Passport. If a Ranger moves from one MPA to another, they can show their Field Log to prove they have already been assessed on 4.7 Useful Technologies or 3.4 Enforcement and Compliance.

Finally, a post-field reflection could be included where learners develop a short report or data visualization demonstrating they understand why the field work they did was important.

To professionalize the 27 modules, a stacked model could be employed where individual module badges build toward professional certificates. Rather than just a Certificate of Completion, a hierarchy of credentials that mirrors the three professional personas can be employed (see Table 5).

Table 5. Example of a potential certification system

Credential Type	Requirements	Example of Target Audience
Micro-Credential (Badge)	Completion of a single module (e.g., Module 2.1)	Specialists needing a specific skill.

Professional Certificate	Completion of all modules in Tier 1 and a specific Pillar in Tier 2.	The Field Practitioner
Advanced Diploma	Completion of Tier 1 and 2 (Foundational and Technical units) and a Field Project.	The Conservation Scientist
Regional MPA Manager Certification	Completion of the full 27-module curriculum.	The Manager & Policy Lead

3 CURRICULUM IMPLEMENTATION

The implementation of this curriculum will require a robust network of strategic alliances and regional capacity builders (see Table 6) to ensure that MPA management in the Wider Caribbean transition from theoretical concepts to standardized, professionalized field practices. Central to the roll out of the curriculum will be intergovernmental partnerships with entities like the United Nations Office for Project Services (UNOPS) and the United Nations Development Programme (UNDP), which facilitate large-scale initiatives such as the Protect and Restore Ocean Capital and Blue Economies (PROCARIBE+) and the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+) projects to strengthen Marine Spatial Planning (MSP) and information management. These high-level efforts can then be complemented by the technical expertise of the Specially Protected Areas and Wildlife - Regional Activity Centre (SPAW-RAC), which, alongside the Global Coral Reef Monitoring Network (GCRMN) Caribbean, provides the standardized biophysical and socioeconomic guidelines necessary for consistent regional monitoring. Leveraging the existing training legacies of the Caribbean Marine Protected Areas Management Network and Forum (CaMPAM), MPACONnect (Gulf and Caribbean Fisheries Institute), and the Caribbean Natural Resources Institute (CANARI), will allow for an even smoother roll out and potentially increase the reach and visibility throughout the Wider Caribbean Region. Utilizing the region's existing capacity building authorities and pathways for module delivery will greatly aid in fostering a new generation of practitioners equipped to manage the Caribbean's blue economy with scientific rigor and social equity.

Table 6 Key strategic partners to facilitate successful implementation of the curriculum

Modules	Title	Key Strategic Partners
1.1	Conservation Literacy	• CANARI • Conservation Leadership in the Caribbean (CLiC) • TNC
1.2	Introduction to MPAs and OECMs	• UNEP-CEP/SPAW-RAC (CaMPAM) • IUCN-ORMACC • TNC
1.3	Introduction to Conservation Frameworks	• IUCN-ORMACC • UNEP-CEP
1.4	Introduction to the Blue Economy	• OECS Commission • UWI Five Islands (Centre for Excellence for Oceanography and the Blue Economy)
2.1	MPA Ecological Design	• TNC • UNEP-CEP/SPAW-RAC (CaMPAM)
2.2	Introduction to Marine Spatial Planning	• IOCARIBE (UNESCO) • OECS Commission • TNC
2.3	Introduction to Management Planning	• CaMPAM (UNEP-CEP) • IUCN-ORMACC • MPACONnect
2.4	Introduction to Sustainable Financing	• CBF • CDB
2.5	Sustainable Tourism	• Caribbean Tourism Organization (CTO) • Caribbean Alliance for Sustainable Tourism (CAST) • UWI-CERMES
2.6	Alternative Livelihoods Planning	• CANARI

Modules	Title	Key Strategic Partners
		• UNEP-CEP/SPAW-RAC (CaMPAM)
3.1	MPA Governance	• CANARI • The Ocean Coordination Mechanism (OCM)
3.2	Ecosystem-based Management	• UNDP • UNEP
3.3	Fisheries Biology and Management	• CRFM • GCFI • UWI-CERMES
3.4	Enforcement and Compliance	• CARICOM Implementation Agency for Crime and Security (IMPACS) • Regional Security System (RSS) • MPACConnect
3.5	On-site Management	• MPACConnect • UNEP-CEP/SPAW-RAC (CaMPAM)
3.6	Organizational Management	• CANARI • MPACConnect
4.1	Biophysical Monitoring	• Global Coral Reef Monitoring Network (GCRMN) Caribbean • TNC • MPACConnect • UWI-CERMES
4.2	Protected Area Management Effectiveness Evaluation	• IUCN-ORMACC
4.3	Socioeconomic Monitoring	• CANARI • UWI-CERMES
4.4	Economic Valuation	• TNC • UWI-CERMES • World Resources Institute (WRI)
4.5	Reporting	• IUCN-ORMACC • UNEP-CEP
4.6	Data and Information Management	• IOCARIBE (UNESCO) • UNEP-CEP
4.7	Useful Technologies	• TNC • UWI-CERMES
5.1	Stakeholder Engagement	• CANARI • CRFM • UNEP-CEP/SPAW-RAC (CaMPAM)
5.2	Conflict Resolution	• CANARI • UNEP-CEP/SPAW-RAC (CaMPAM)
5.3	Partnerships and Coordination	• OECS Commission • The Ocean Coordination Mechanism (OCM) • UNEP-CEP
5.4	Public Outreach and Education	• CANARI • UNEP-CEP/SPAW-RAC (CaMPAM)

As a guide, organizations such as:

- UNEP-CEP (SPAW RAC) and the Organization of Eastern Caribbean States (OECS) Commission can boost the legal and technical arm of the curriculum, for example, to ensure data collection for regional reporting through the standardized GCRMN-Caribbean monitoring.
- The OECS and Caribbean Development Bank (CDB) can boost the economic and policy arm of the curriculum, providing the strategic link between marine conservation and national economic development.
- UWI (CERMES and Five Islands) can boost the academic arm of the curriculum, providing the scientific theory.
- CANARI and the International Union for Nature (IUCN) can boost the social and governance arm of the curriculum, providing assistance with the mastering of the ‘human dimension’ of conservation.
- CaMPAM & MPACConnect to provide the operational engine by driving the ‘boots on the ground’ or fins in the water’ training.

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To maximize the impact of the hybrid modules, field sites should be selected based on their ‘Living Lab’ qualities, i.e. places where the specific challenges of that module are currently being tackled with high-quality data or innovative management. Table 7 provides a matrix of the most suitable project country for each module while Table 8 provides a potential site and the rationale for selection.

Table 7 Matrix of the most suitable project country for each module

Module	Barbados	Belize	Guyana	Jamaica	Saint Lucia	Panama
2.1 MPA Ecological Design						
2.2 Introduction to Marine Spatial Planning (MSP)						
2.3 Introduction to Management Planning						
3.3 Fisheries Biology and Management						
3.4 Enforcement and Compliance						
3.5 On-site Management						
4.1 Biophysical Monitoring						
4.2 Protected Area Management Effectiveness Evaluation						
4.3 Socioeconomic Monitoring						
4.7 Useful Technologies						
5.1 Stakeholder Engagement						

Table 8 Potential field sites within the identified project countries

Module	Country / Site	Rationale for Selection
2.1 MPA Socio-Ecological Design	Belize (Turneffe Atoll)	An atoll system with complex connectivity between mangroves, seagrass, and reef; ideal for studying spatial design and Ridge-to-Reef connectivity.
2.2 Introduction to Marine Spatial Planning	Barbados (South/West Coast)	Barbados is currently leading a major Blue Economy and MSP rollout. This site offers a high-stakes environment where

Module	Country / Site	Rationale for Selection
		tourism, shipping, and conservation overlap.
2.3 Introduction to Management Planning	St. Lucia (SMMA)	The Soufrière Marine Management Area (SMMA) is a global pioneer in zoning and participatory management planning; a perfect case study for adaptive planning.
3.3 Fisheries Biology and Management	Guyana (Shell Beach)	Offers a unique look at industrial/artisanal fisheries overlap (Seabob stock) and the management of large-scale estuarine protected areas.
3.4 Enforcement and Compliance	Belize (Hol Chan / Glover's Reef)	Belize utilizes advanced 'Smart' patrolling and has a robust maritime enforcement presence that serves as a regional benchmark for MCS (Monitoring, Control, and Surveillance).
3.5 On-site Management	Jamaica (Montego Bay Marine Park)	Focuses on managing high-density tourism and urban runoff while maintaining park infrastructure (buoys, signage, and visitor centers).
4.1 Biophysical Monitoring	Belize (Caye Caulker/Ambergris Caye)	Home to the longest barrier reef in the Western Hemisphere with decades of established GCRMN/AGRRA monitoring data for students to reference.
4.2 Protected Area Management Effectiveness Evaluation	St. Lucia (Pigeon Island/Pitons)	Ideal for testing IUCN Green List or METT assessment tools in sites that have both high tourism pressure and cultural heritage status.
4.3 Socioeconomic Monitoring	Barbados (Oistins/Speightstown)	Active fishing communities where SocMon Caribbean has been piloted; excellent for learning how to survey local resource users and vendors.
4.7 Useful Technologies	Panama (Coiba National Park)	A massive, remote site where the use of satellite monitoring, drones, and remote sensors is essential for effective oversight.
5.1 Stakeholder Engagement	Jamaica (Oracabessa Bay)	A prime example of a community-led fish sanctuary where local fishers took the lead in management; ideal for

Module	Country / Site	Rationale for Selection
		learning the human dimension.”

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In an attempt to not duplicate what already exists, we are suggesting the utilisation of existing training materials offered by MPACConnect, the Socioeconomic Monitoring for Coastal Management in the Caribbean (SocMon Caribbean) and the IUCN Regional Office for Mexico, Central America and the Caribbean (IUCN-ORMACC) (see Annex VII for more details on the capacity building programs offered by these entities). Each entity has indicated their willingness to partner with this initiative to ensure the delivery of these respective modules.

- MPACConnect has a long history and a wealth of experience delivering enforcement training throughout the Caribbean region via their capacity building program (see Annex VIII for MPACConnect’s Enforcement curriculum outline).
- SocMon Caribbean has a long history and a wealth of experience building capacity in socioeconomic monitoring. The outline of the socioeconomic monitoring module, provided in Annex V, is aligned with the current offering of SocMon Caribbean.
- IUCN-ORMACC, through the BIOPAMA programme, has a long history and a wealth of experience building capacity in Protected Area Management Effectiveness (PAME) assessments. IUCN has developed a management effectiveness course for the Caribbean region, and they are intending to partner with UWI-CERMES for its roll out by August 2026. The outline of the protected area management effectiveness evaluation module, provided in Annex V, is aligned with the developed course.

In each of the instances indicated above, the content of the respective courses is not open source and thus are not being shared.

3.3 *Supporting the use of Software for Moodle Delivery*

In the Caribbean, the choice of software for online courses is largely driven by a mix of institutional tradition, the need for offline accessibility, and regional technical support. The most utilised platforms within the Caribbean include:

1. Moodle (The Regional Standard)

Moodle is the heavyweight of Caribbean e-learning because it is open-source and highly customizable, it is used by almost every major educational and governmental institution in the region.

- Who uses it: UWI (including CERMES) uses a Moodle-based environment for its MSc. and professional development courses. The Caribbean Examinations Council (CXC) also utilizes a Moodle-based Virtual Learning Environment (VLE) for its Professional Learning Institute (PLI).
- Why it's popular: It allows institutions to host data locally (important for data sovereignty) and has a robust mobile app that supports offline content—crucial for islands with inconsistent internet or high data costs.

2. Google Classroom (The Quick-Deploy Choice)

Since 2020, Google Classroom has become the go-to for smaller training institutes, secondary schools, and NGOs because of its low barrier to entry and integration with Google Workspace.

- Who uses it: Independent trainers, many Caribbean ministries of education, and technical training NGOs.
- Why it's popular: Most Caribbean students already have a Gmail account, making the onboarding process nearly instant.

3. Canvas (The Modern Alternative)

While Moodle is the veteran, Canvas is rapidly gaining ground in the Caribbean, particularly for premium professional development and higher-end corporate training.

- Who uses it: Regional medical schools (like St. George's University in Grenada) and specific private sector training hubs in Trinidad and Barbados.
- Why it's popular: It is widely considered to have a more modern, clean user interface than Moodle and requires less technical maintenance from the instructor's side.

Table 9 Comparison of software for module delivery

Goal	Recommended software
Academic Credibility	Moodle (aligns with UWI/CERMES standards)
High Participation/Ease	Google Classroom (easiest for stakeholders to join)
Field Professionalism	Canvas (best mobile experience and polished look)
Low-bandwidth areas	Moodle (best 'download for offline' features)

4 RECOMMENDATIONS

4.1 *Way Forward*

- To finalize the full MPA training curriculum, the modules that emerged as lower priority (Table 1) should be developed following a similar process to the one taken for those developed (i.e. development of the module outline → review of the outline by thematic experts → development of module content).
- The content of the developed modules, along with any associated content, should undergo a subsequent review by a thematic expert (preferably the same one that reviewed the module outline). In addition, the chosen instructor for each module should also review the developed content and make any necessary tweaks or adjustments to suit their delivery style.

4.2 Professionalization Strategy

- Adopt a Professional Framework to institutionalize MPA management as a distinct profession by utilizing this curriculum to develop competent professionals across all levels, from field staff to directors. One example of this would be to partner with Academic institutions to offer the modules as short courses (certificates) or as matriculated courses as part of taught degree (Bachelors and/or Masters degrees⁴).
- Establish a common language to ensure all personnel, regardless of their specialization, complete the Tier 1 foundational modules to ensure a unified understanding of the Blue Economy, legal frameworks, and conservation literacy.

⁴ UWI-CERMES currently offers specialization streams within its taught Masters programme and thus a potential possibility would be the addition of an MPA specific stream in which the developed curriculum could be rolled out.

- Utilize the curriculum’s modular design to allow organizations to tailor training to specific local needs or high-priority areas identified during regional assessments.

4.3 *Strategic Delivery and Partnerships*

- Utilize a blended learning approach for implementation consisting of a mix of asynchronous online learning (for information-heavy topics), synchronous online learning (to facilitate Socratic dialogue) and hybrid learning (for the opportunity to develop technical skills in the field).
- Leverage regional expertise and pathways by partnering with established entities like CaMPAM, MPACONnect, SocMon Caribbean and IUCN-ORMACC for operational training, and UWI (CERMES and Five Islands) for academic and scientific theory (see Table 6).
- It is strongly suggested that the developed modules be integrated within the existing MPA capacity building programs throughout the region that already have a long history of enhancing capacities (see Annex VII).
- Utilize ‘Living Labs’ to conduct field components at sites with proven management successes, such as Belize for ecological design, St. Lucia for management planning, and Barbados for socioeconomic monitoring.

- Align implementation with regional projects like PROCARIBE+ and CLME+ to ensure the training supports broader goals like Marine Spatial Planning (MSP) and the ‘30 by 30’ conservation targets.
- Standardized monitoring through the coordination with SPAW-RAC and GCRMN-Caribbean to ensure that monitoring training results in data that can be used for official regional reporting.

4.4 *E v a l u a t i o n a n d M a s t e r y*

- Utilize multimodal assessment which moves away from a one-size-fits-all testing toward a framework that evaluates ‘soft’ leadership skills through simulations and ‘hard’ field skills via proficiency checklists.
- Implement bridge activities that require learners to complete digital tasks (like desktop gap analyses or stakeholder mapping) that directly feed into their physical fieldwork to maximize practical training time.
- Mandate the use of field logs signed by instructors to provide practitioners with verifiable evidence of their skills that can follow them throughout their careers in the region.

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Component	Reviewer
Modules and/or curriculum outline	• Dr. Patrick McConney (former Senior Lecturer, UWI-CERMES) • Dr. Mary Allen (Global SocMon Coordinator) • Emma Doyle (MPAConnect Coordinator, Gulf and Caribbean Fisheries Institute) • Dr. Georgina Bustamante (former Coordinator, CaMPAM) • Azra Blythe Mallet • Genesis Mendez Mojica • Allena Joseph • Sanya Compton
1.1 Conservation Literacy	• Dr. David Gill (Assistant Professor, Duke University)
1.2 Introduction to MPAs and OECMs	• No response from potential reviewer
1.3 Introduction to Conservation Frameworks	• Dr. Fabian Kyne (Technical Officer, CBF)
1.4 Introduction to the Blue Economy	• No response from potential reviewer
2.1 MPA Ecological Design	• Dr. David Gill (Assistant Professor, Duke University)
2.2 Introduction to Marine Spatial Planning (MSP)	• Allison Wiggins (Coastal Planner, CZMU)
2.3 Introduction to Management Planning	• Dr. Patrick McConney (former Senior Lecturer, UWI-CERMES)
2.4 Introduction to Sustainable Financing	• Dr. Fabian Kyne (Technical Officer, CBF) • Sabine Klaus (Head of Programme, Blue Economy and Skills in the East Caribbean, GIZ)
3.1 MPA Governance	• Professor Robin Mahon (Professor Emeritus, UWI-CERMES) • Dr. Patrick McConney (former Senior Lecturer, UWI-CERMES)
3.2 Ecosystem-based Management (EbM)	• Professor Robin Mahon (Professor Emeritus, UWI-CERMES)
3.3 Fisheries Biology and Management	• Professor Hazel Oxenford (Professor Emeritus, UWI-CERMES)
3.4 Enforcement and Compliance	• Emma Doyle (MPAConnect Coordinator, Gulf and Caribbean Fisheries Institute)
4.1 Biophysical Monitoring	• Dr. Susana Perera Valderrama (Programme Management Officer, SPAW Sub-Programme) • Professor Hazel Oxenford (Professor Emeritus, UWI-CERMES)
4.2 Protected Area Management Effectiveness Evaluation	• Hyacinth Armstrong-Vaughn (Protected Areas Officer, IUCN-ORMACC)
4.3 Socioeconomic Monitoring	• Dr. Mary Allen (Global SocMon Coordinator)

Component	Reviewer
5.1 Stakeholder Engagement	• Melanie Andrews-Bacchus (Senior Technical Officer, CANARI) • Dr. Janice Cumberbatch (Senior Lecturer UWI-CERMES)
5.2 Conflict Resolution	• Melanie Andrews-Bacchus (Senior Technical Officer, CANARI)

5.2 *Annex I : UN I T I – I n t r o d u c t i o n t o C o n s e r v a t i o n*

Module title	1.1 Conservation Literacy
Module description	This module offers a comprehensive introduction to conservation literacy by establishing core concepts and terminologies related to conservation in the areas of biodiversity, the ocean and the climate. It then moves on to examine key areas such as benefits and roles, identifying critical high biodiversity areas, threats and underlying principles.

Learning outcomes	Upon successful completion of the course, learners will be able to: • define and differentiate between key conservation terms • categorize and explain the four major types of ecosystem services (provisioning, regulating, supporting, cultural) using specific real-world examples for each category • identify current methodologies utilised for recognising high biodiversity areas • identify and explain the five major anthropogenic drivers of biodiversity loss • identify and explain the seven essential principles of ocean science • identify and explain the seven essential principles of climate science
Module content	The following topics will be addressed: Concepts and terminologies • defining biodiversity at all levels (genetic, species, landscape level) • defining area-based conservation • defining ecosystem services • ocean literacy • climate literacy Importance and benefits of biodiversity • ecosystem services, human well-being and sustainable development Identifying high biodiversity areas • biodiversity hotspots, KBAs, ecoregions, ICCAs Threats to biodiversity • habitat destruction/alteration, overexploitation, pollution, climate change, invasive species, pandemics Principles of ocean science Principles of climate science
Learning resources	• Climate Literacy: The Essential Principles of climate Science • Global Environment Outlook 6: Regional Assessment for Latin America and the Caribbean • Guidelines for conservation literacy • NOAA Ocean Literacy publication • UNESCO Ocean Literacy portal

Module title	1.2 Introduction to MPAs and OECMs
Module description	This module provides an exploration of Marine Protected Areas (MPAs) and Other Effective Area-Based Conservation Measures (OECMs), the primary tools for achieving global ocean conservation goals, such as the “30x30” target. The module begins by, defining core concepts and terminologies and tracing the

	history and status of global marine area protection. Learners will analyse the crucial roles, values, and ecological benefits of effective marine protection and be exposed to different designation levels and management categories defined by the IUCN. The module will explore various governance types and analyse the major challenges and threats to protected area effectiveness.
Learning outcomes	Upon successful completion of the course, learners will be able to: • define and distinguish MPAs and OECMs • summarize the historical evolution of MPAs and explain the status • categorize and articulate roles, values (ecological and socio-economic) and benefits of MPAs • match IUCN Protected Area Management Categories to their specific conservation objectives • explain the existing governance types • recognise the major threats to MPA effectiveness
content	The following topics will be addressed: Concepts and terminologies • MPAs and OECMs History and status Roles, values and benefits • fisheries, tourism, cultural, research and education Designation levels • international (e.g. Ramsar and World Heritage sites), regional (e.g. SPAW-listed MPAs) and national Management categories (IUCN) • I – VI Governance types • governance by government, shared governance, private governance, governance by indigenous peoples and local communities Challenges and threats • inadequate resources (human, financial technological), weak governance frameworks. poor design and planning, lack of enforcement, limited monitoring and evaluation, limited stakeholder engagement
Learning resources	• Area-based conservation in the twenty-first century • IUCN Guidelines for applying the IUCN protected area management categories to marine protected areas • IUCN Guidelines for MPAs • IUCN Guidelines on OECMs • IUCN Guidelines on protected area governance and management • IUCN Guidelines on Recognising and reporting OECMs

Module title	1.3 Conservation Frameworks
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Module description	This module provides a comprehensive overview of the key legal and policy instruments that underpin global efforts in biodiversity conservation and sustainable resource management, from high-level international conventions and treaties to national action plans.
Learning outcomes	Upon successful completion of the course, learners will be able to: • distinguish and define the core legal and operational terms related to conservation frameworks • distinguish between international, regional and national frameworks • evaluate the role and significance of conservation frameworks
Module content	The following topics will be addressed: Concepts and terminology • frameworks, conventions, treaties, protocols, multilateral environmental agreements (MEAs) International frameworks • BBNJ agreements (High Seas Treaty) • Convention on Biological Diversity (PoWPA, Aichi targets, GBF) • Convention on Migratory Species (CMS) • Ramsar Convention • UNESCO Man and the Biosphere (MAB) Programme • UNESCO World Heritage Convention (WHC) • United Nations Convention on the Law of the Sea (UNCLOS) Regional frameworks • UNEP Regional Seas Programme – Cartagena Convention (SPAW protocol) National frameworks • National Biodiversity Strategy and Action Plans (NBSAPs) • Nationally Determined Contributions (NDCs)
Learning resources	• Conventions • UN InforMEA

Module title	1.4 Introduction to the Blue Economy
Module description	This module introduces learners to the concept of the blue economy and provides a comprehensive and critical examination of what it is. Learners will be equipped to critically analyse ocean development policies, evaluate the sustainability of marine industries, and propose actionable, integrated strategies for transitioning to a resilient and equitable blue economy.
Learning outcomes	Upon successful completion of the course, learners will be able to: • identify and differentiate between key concepts such as the Ocean Economy and the Blue Economy • analyse the rationale for the Blue Economy by explaining its contribution to three specific global goals • categorise and describe the primary Blue Economy industries in the Caribbean • evaluate critical pathways to the implementation of the blue economy • identify and classify major threats to the ocean and to blue economy development • propose specific business opportunities within the blue economy that directly integrate conservation goals
Module content	The following topics will be addressed: Concepts and terminology • definitions and components (ocean economy, natural capital, marine spatial planning, etc.) Rationale • sustainable development, economic diversification, food security, livelihoods, energy, maritime transport, conservation, social sustainability and equity Components and industries • fisheries and aquaculture, coastal and maritime tourism, marine biotechnology and bioprospecting, renewable energy, maritime transport Pathways to implementation • integrated governance and planning, innovative financing mechanisms, institutional strengthening, and capacity building Challenges and threats • institutions, resources, integration, climate change impacts, marine pollution, habitat destruction, overexploitation, political or business interests Opportunities • business innovation, research, conservation
Learning resources	• Financing the Blue Economy – A Caribbean Development Opportunity • The potential of the Blue Economy • Towards a blue economy: A promise for sustainable growth in the Caribbean

Module title	2.1 MPA Ecological Design
Module description	This module provides an exploration of the principles and methods required for the ecological and social design of effective MPAs, with a focus on the spatial, biological and social (cultural and economic) rationale that underpins successful marine conservation. Learners will gain a deep understanding of the key scientific concepts including representativeness, replication, and connectivity that dictate where and how much of the coast and ocean must be protected. The module integrates empirical rules of thumb, the ecological design of large-scale MPAs and the ecological importance of MPA networks.
Learning outcomes	Upon successful completion of the course, learners will be able to:

Module title	2.1 MPA Ecological Design
	• define and distinguish the key MPA design related concepts such as representativeness, connectivity, replication, systemic conservation planning • better identify and prioritise key ecological/biological, social, economic and cultural features for conservation • explain how the Marxan algorithm uses conservation targets and cost layers to produce an ecologically optimal spatial design • justify the use of specific zones to allow for intended levels of protection • contrast the ecological advantages and scientific challenges of Large-Scale MPAs • justify the need for MPA networks and the key elements to be included
Module content	The following topics will be addressed: Concepts and terminologies • MPA, MMA, LMMA, zones, representativeness, connectivity Conservation prioritisation • identifying priority conservation area • decision support tools (MARXAN) Considerations for design • ecological/biological, social, economic, cultural • rules of thumb • size, connectivity, replication, representativeness • precautionary principles Levels of protection • zonation (compatibility, carrying capacity etc.) Large-Scale MPAs • concept, examples MPA networks • concept, examples, types Challenges to implementing MPAs
Learning resources	• IUCN Guidelines for conserving connectivity through ecological networks and corridors • IUCN Guidelines for Establishing Marine Protected Areas • IUCN Guidelines on large-scale MPAs • MARXAN conservation solutions • MPA Network Design and Management: Framework and Guidance (2021) • Practical guide for designing MPA networks

Module title	2.2 Introduction to Marine Spatial Planning (MSP)
Module description	This module introduces MSP, beginning by defining core concepts and terminology and outlining the key goals and benefits of the framework. Students will systematically examine the MSP process through the globally recognized ten-step framework, focusing on how planning moves from initial assessment and

	stakeholder engagement to the design of specific management zones, and implementation of the plan. Emphasis is placed on the practical aspects of implementation, covering the necessary regulations, the definition of institutional roles, and the strategies needed for effective compliance and enforcement. The module concludes with the principles of monitoring and evaluation, demonstrating how to select appropriate indicators and criteria to track progress and ensure the MSP plan remains effective and adaptable over the long term.
Learning outcomes	Upon successful completion of the course, learners will be able to: • define and differentiate between key concepts such as MSP, Blue Economy and Ocean Governance • categorize the core benefits of MSP into distinct ecological, economic, and social outcomes • identify the difference in scope and spatial scale of the protection provided by a single MPA and a national system of MPAs, as components of MSP • sequence and describe the steps in the MSP framework • identify the necessary regulations and institutional roles required to legally adopt and enforce a spatial plan • select and justify measurable indicators to track the success of an implemented MSP plan
Module content	The following topics will be addressed: Concepts and terminology • MSP, BE, ocean governance, stakeholder engagement, zoning (compatibility, carrying capacity etc.) Goals and benefits • conflict reduction, sustainable economic development, conservation etc. MSP process • ten-step framework • Caribbean Regional MSP step by step guide • stakeholder engagement (identification of stakeholders and inclusive engagement strategies) Implementation of the plan • regulations, roles, compliance, enforcement Monitoring and evaluation • indicators and criteria
Learning resources	• Latin America and the Caribbean regional training and MSPforum resources • The Marine Spatial Planning Index: a tool to guide and assess marine spatial planning • UNESCO International guide on MSP • UNESCO MSP: A step-by-step approach

Module title	2.3 Introduction to Management Planning
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Module description	This module focuses on the transition from MPA design to management planning through the development of a comprehensive Management Plan. The module begins by establishing the foundational concepts, including the need for defining clear, measurable Management Objectives. It examines how international, regional, and national dimensions impose, guide, enable and assist mandates and constraints on local action. A great emphasis is placed on the IUCN's 13-step management planning framework.
Learning outcomes	Upon successful completion of the course, learners will be able to: • differentiate between key concepts such as visions, goals, objectives etc. • explain the various dimensions (levels) of management planning • distinguish the primary roles, responsibilities and skills needed for successful management planning • transform a broad conservation/sustainable development/blue economy goal into measurable objectives suitable for inclusion in a management plan • propose a strategy for the effective involvement of practitioners and stakeholders • outline and apply the critical steps for preparation and implementation of management plans
Module content	The following topics will be addressed: Concepts and terminology • management planning • management objectives Dimensions (levels) of management planning • international, regional and national, site and local community Management planning process • involving practitioners and stakeholders (consultation) • roles, responsibilities, skills • boundaries (e.g. including watershed and satellite areas that seasonally impact the MPA such as via tourism) • required resources • prioritizing resources • updating threats Preparation and implementation of management plans • IUCN 13-step framework • adaptive management and adaptation • operationalising the management plan
Learning resources	• FAO Planning and implementing MPAs • IUCN Guidelines for management planning of PAs • IUCN Guidelines on protected area governance and management

Module title	2.4 Introduction to Sustainable Financing
Module description	This module provides an introduction to the essential practice of Conservation Finance, focusing on the financial planning necessary to ensure the long-term sustainability of protected areas and conservation initiatives. The module begins by establishing the conceptual framework, defining core terms and then progressing to analyse the funding landscape and emerging trends in conservation investment. A significant portion of the module is dedicated to practical financing mechanisms. The course concludes by examining real-world challenges and providing strategies for achieving long-term fiscal stability that are inclusive and equitable for all people within coastal communities.
Learning outcomes	Upon successful completion of the course, learners will be able to: • understand key concepts and terminology such as a Financial Plan and a Business Plan • justify the need for conservation finance by identifying the tangible economic value of biodiversity, in addition to its cultural and spiritual value and its gender-differentiated impacts on livelihoods • analyse the current landscape of conservation funding throughout the region to appreciate existing sources and gaps • explain a range of financing mechanisms and understand their applicability • construct a simple financial plan for an MPA (including operational and investment costs, revenue opportunities) • identify challenges and propose possible options for MPA funding
Module content	The following topics will be addressed: Concepts and terminology • economic value of biodiversity (ecosystem services), financial planning, business planning, conservation finance (funding, financing and investment) Status and trends • current landscape, current status of ocean funding, sources and gaps (including biodiversity finance gaps) Financing mechanisms • user fees, conservation trust funds, payment for ecosystem services, debt for nature swaps, blue carbon credits, local donors, blended finance, concessional loans tied to sustainable practices, insurance, microfinance, crowdfunding, repurposing harmful subsidies, ecological fiscal transfers, green and blue budget tagging, (marine) biodiversity credits & green/blue/conservation bonds as well as private sector Financial planning • developing a prioritized financial plan (defining clear goals of the conservation measure, considering social/economic/ecologic impacts in a participative manner, assessing alignment with broader policy goals in various sectors, promoting cross-sectoral planning across relevant ministries)

Module title	2.4 Introduction to Sustainable Financing
	Challenges and options • legal and institutional barriers, unreliable funding, lack of financial expertise, implementation challenges • Caribbean Biodiversity Fund, Blue Action Fund, eco.businessFund, Mesoamerican Reef Fund, PACIFICO, Global Fund for Coral Reefs, leveraging partnerships, aligning policies, attracting local donors
Learning resources	• CBD Best Practices in Gender and Biodiversity • CBD Making money local: can PAs deliver both economic benefits and conservation objectives? • IUCN Guidelines on economic values for PAs • IUCN Guidelines on financing PAs • IUCN sustainable financing of PAs – a global review of challenges and options • IUCN Upholding Gender Equality and Women’s Empowerment in Post 2020 GBE • Mapping Ocean Wealth • State of Global Ocean Funding • UNDP BIOFIN Workbook 2024 – Finance for Nature • UNEP Ocean Investment Protocol • UNEP Principles for Blue Finance • WWF’s Guide to Conservation Finance • UNEP Guide how to finance ocean recovery through different sectors

Module title	3.1 MPA Governance
Module description	This module provides a detailed examination of the frameworks, principles, and models that determine how decisions are made, authority is exercised, and stakeholders are involved in the management of Marine Protected Areas. Learners will be able to critically analyse the structures, processes, and challenges inherent in regional conservation policy and apply effective governance models to achieve sustainable outcomes in marine resource management.
Learning outcomes	Upon successful completion of the course, learners will be able to:

	• distinguish and define the terms governance and management in the MPA context • recognise the IUCN governance types • analyse the components of the governance framework at the site level • evaluate the quality of governance based on the principles of good governance • apply tools that can be utilised to assess governance in MPAs • identify and categorize challenges to governance and propose targeted solutions • explain the necessity of adaptive and participatory governance based on the core principles
Module content	The following topics will be addressed: Concepts and terminology • governance vs management Governance types • Solely by government, shared governance (e.g. co-management), private governance, governance by indigenous peoples and local communities Governance principles • accountability, transparency, fairness and rights, stakeholder participation • legal and institutional structure Assessing and evaluating governance • Governance Assessment for Protected Areas (GAPA), Site-level Assessment for Governance and Equity (SAGE) Governance issues • institutional and legal challenges, stakeholder and equity challenges, resource and data challenges, political will Adaptive governance • core principles (responsiveness and effectiveness) • institutions for learning • working with MPA boards
Learning resources	• IUCN Guidelines on governance of PAs • Report of the first workshop on adaptive capacity for marine protected area governance in the eastern Caribbean • Towards marine ecosystem-based management in the wider Caribbean • UNEP MPA governance guide • UNEP Case study compendium

Module title	3.2 Ecosystem-based Management (EbM)
Module description	This module explores EbM as a crucial, holistic approach to managing human activities that integrates environmental, social, and economic considerations across entire ecosystems. The module establishes the rationale for EbM, emphasizing its critical role in managing cumulative impacts, addressing resource conflicts, and building ecosystem resilience against global stressors like climate change and localised stressors such as pollution. Learners will be equipped to

	analyze the limitations of conventional management and actively participate in proposing integrated, ecosystem-scale solutions for sustainable resource use and conservation.
Learning outcomes	Upon successful completion of the course, learners will be able to: • distinguish and define core terms related to EbM • justify the necessity of EbM by explaining how it improves on customary management • identify and analyse the core elements of EbM • sequence and describe the phases of EbM implementation • evaluate key EbM strategies and tools (MSP, MPAs, EBFM) based on the role that each tool plays • understand the data and information requirements of EBM and approaches to acquiring them
Module content	The following topics will be addressed: Concepts and terminology • ecosystem approach, ecosystem approach to fisheries, Integrated Coastal Zone Management, Ecosystem-based Fisheries Management, precautionary approach, island system management Rationale • addressing conflicts, increasing resilience, managing cumulative impacts Core elements • ecosystem connections, appropriate spatial & temporal scales, understanding and addressing cumulative impacts, managing for multiple objectives, embracing change, learning and adapting Implementation of EbM • visioning, planning, implementation Key strategies and tools • Integrated Coastal Zone Management, MSP, Ecosystem-based Fisheries Management, MPAs
Learning resources	• Medidas para la gestión ecosistémica de las zonas marinas y costeras • Taking Steps toward Marine and Coastal Ecosystem-Based Management • The Ecosystem Approach • Towards Marine Ecosystem-based Management in the Wider Caribbean

Module title	3.3 Fisheries Biology and Management
Module description	This module starts by reviewing the global and regional importance and state of fisheries production including aquaculture. It then introduces the steps involved in a biological stock assessment to guide and support fisheries management. The

Module title	3.3 Fisheries Biology and Management
	module further explores existing frameworks and bodies supporting fisheries management, ecosystem-based management approaches, planning and the various tools that can be considered in the context of fisheries management in the Caribbean and some of the critical challenges faced.
Learning outcomes	Upon successful completion of the course, learners will be able to: • understand the scope and importance of fisheries biology and management, particularly as it relates to the Caribbean region • be aware of the key challenges currently facing fishery managers at the global, as well as the Caribbean regional level • be familiar with the broad features, trends and future potential of global and regional fishery and aquaculture production • demonstrate a sound understanding of the steps involved in a biological assessment of a fishery resource • evaluate, select and justify the use of management tools and implementation strategies appropriate for fishery resources within a Caribbean context • demonstrate a good knowledge of the legal frameworks and bodies guiding sustainable use of fishery resources within a Caribbean context • understand the process of fishery management planning and be able to develop a fishery management plan
Module content	The following topics will be addressed: Concepts and terminology • fisheries, fisheries biology, Ecosystem-based Fisheries Management, data-limited fisheries, traditional knowledge Global and regional trends • production, capture fisheries, aquaculture Biological stock assessment • unit stock, conventional and non-conventional (genetic based) stock identification techniques, stock abundance, stock dynamics, yield prediction modelling Rationale for management • why manage, impacts of fishing (unsustainable), livelihoods, food security Legal frameworks and bodies • UNCLOS, FAO Code of Conduct, Code of Conduct (CoC) framework for Small-Scale Fisheries (SSF), BBNJ Agreement (Biodiversity Beyond National Jurisdiction), ICCAT, WECAFC, CARICOM/CRFM, OSPESCA Management approaches • Ecosystem-based Fisheries Management, stakeholder involvement Management planning

Module title	3.3 Fisheries Biology and Management
	- steps in developing a fisheries management plan, sectoral integration, climate change adaptation, disaster risk management Management tools - output tools, input tools, monetary (market-based instruments), MPAs Challenges IUU, overexploitation, habitat destruction, invasive species, climate change (sargassum influxes), associated crime, limited resources (capacity and financial), limited data, limited enforcement
Learning resources	Governance of transboundary fishery resources in the wider Caribbean Impacts of climate change on fisheries and aquaculture Scientific basis for ecosystem-based management in the Lesser Antilles The state of the world's fisheries and aquaculture 2024

Module title	3.4 Enforcement and Compliance
Module description	This module focuses on the critical function of Enforcement as the system of actions and mechanisms required to ensure compliance with the rules and regulations of MPAs. The module focuses on the operational reality of protecting marine resources. Learners will be equipped to analyse an MPA's enforcement strategy, evaluate its effectiveness, and propose an integrated, technology-supported, and socially legitimate scalable plan to ensure regulatory compliance and achieve conservation goals.
Learning outcomes	Upon successful completion of the course, learners will be able to: • distinguish and define the key principles of enforcement • analyse the principles for effective enforcement • be fully familiar with laws, regulations and their legal bases • evaluate operational requirements and explain why they are necessary • identify the use of suitable technologies to aid in effective compliance • use the community-based approach to promote compliance with the MPA management, in the context of small islands and coastal communities • analyse systemic challenges and mitigation measures
Module content	The following topics will be addressed: Concepts and terminology • definitions and concepts (monitoring, control, surveillance, enforcement) Conducting enforcement assessments • Monitoring, Control, and Surveillance (MCS) Systems, legal and regulatory frameworks, resource and capacity reviews, stakeholder engagements Principles for effective MPA enforcement • 10 enforcement principles Enforcement frameworks • laws, codes, regulations, decrees Enforcement requirements • dockside and at-sea monitoring, control, surveillance, recordkeeping and reporting, community involvement Technology support • remote sensing tools, vessel monitoring systems (VMS), drones, automatic identification systems (AIS), SMART, radar Enforcement approaches

Module title	3.4 Enforcement and Compliance
	- complementary approaches to stakeholder outreach, Junior Ranger education, sustainable livelihoods, well-developed community reporting programs such as Makai Watch in Hawaii Challenges* - insufficient financing, limited human capacity, lack of equipment, illegal activities, gaps or overlaps among agencies, data and monitoring gaps, governance and political will
Learning resources	Legal frameworks for MPA enforcement in the Caribbean: challenges and opportunities Legal tools for strengthening MPA enforcement MPA enforcement toolkit

* It should be noted that the inclusion of this topic should depends on who the learners are. If it's enforcement officers then it should be excluded since these are realities within which they have to work, yet they have little scope to make change. If it's MPA managers and related agencies then it should be included.

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Module title	4.1 Biophysical Monitoring
Module description	This module provides a foundational understanding of the principles, methodologies, and indicators used to conduct effective biophysical monitoring in marine protected areas (MPAs). This process is essential for assessing an MPA's ecological health, measuring its performance, and guiding adaptive management decisions. The module focuses on three critical habitats (coral reefs, seagrass beds and mangroves). Learners will be equipped to design, implement, and critically analyse a biophysical monitoring program, effectively translating complex scientific data into clear, defensible management and policy decisions for the long-term success of MPAs. The module will also introduce the learner to challenges and associated mitigation measures.
Learning outcomes	Upon successful completion of the course, learners will be able to: ● analyse the rationale for biophysical monitoring as it relates to key concepts of MPA management ● evaluate the status of key habitats based on its health and the threats being faced ● design a robust sampling strategy based on key monitoring considerations (e.g. scale and scope, frequency, resources etc.) ● select and justify appropriate methodologies for biophysical monitoring ● analyse monitoring results and utilise them for making management decisions ● identify challenges and appropriate mitigation measures
Module content	The following topics will be addressed: Concepts and terminology ● baseline data, indicators, ecological performance, coral reefs, mangroves, seagrass beds, connectivity Rationale ● adaptive management, accountability and reporting, understanding ecosystem dynamics Habitat ecology, values and threats ● anatomy, distribution, requirements, adaptations, nutrition, reproduction, zonation and succession ● employment and livelihood, products, recreation, educational, ecosystem values ● climate change, physical damage, exploitation/extraction, invasive alien species, degraded water quality Monitoring considerations ● why monitor, sampling design, sampling strategies, monitoring frequency, indicators, low-cost/low-tech monitoring options, ideal vs. feasible monitoring, prioritization of indicators under limited resources (Minimum indicator sets) Monitoring methodologies ● size/area, density of key organisms, community species composition, index of primary production, physical water quality parameters, threats (climate change, physical damage, exploitation/extraction, invasive alien species, degraded water quality), transects, censuses

Module title	4.1 Biophysical Monitoring
	Data management and analysis and decision making • quality control, statistical analysis, communicating findings (to decision-makers, communities, national authorities), linking data to management decisions Monitoring programmes • CARICOMP, AGRRA, Reef Check, GCRMN Challenges and mitigation • funding resources, capacity, data consistency, weather events, sargassum influxes, diseases, ship anchoring/groundings • habitat restoration/rehabilitation
Learning resources	• Caribbean Coastal Marine Productivity (CARICOMP) • GCRMN Methods for ecological monitoring of coral reefs

Module title	4.2 Protected Area Management Effectiveness Evaluation
Module description	This module provides in-depth knowledge of Protected Area Management Effectiveness evaluation (MEE), the essential process used to assess how well a protected area is being managed and whether it is achieving its mandated conservation and social objectives. Learners will be equipped to analyse the performance of an MPA across all stages of the management cycle, apply standardized assessment tools, and use the evaluation results to formulate evidence-based recommendations for adaptive improvements.
Learning outcomes	Upon successful completion of the course, learners will be able to: • justify the necessity of MEE with regards to MPA management • explain the IUCN WCPA six-element evaluation framework • select appropriate methodologies (tools) for conducting MEE based on their local contexts • evaluate, report and communicate MEE results • communicate assessment data and link them to adaptive management decisions • identify and address challenges to ensure the long-term sustainability and effectiveness of management evaluations
Module content	The following topics will be addressed: Introduction to MEE • Concepts and terminology • Purpose and application MEE Framework • Introduction to IUCN-WCPA Framework Rationale for management effectiveness evaluation • are conservation values being met, is management effective, can management be improved Conducting MEE assessments • context, planning, inputs, process, outputs, outcomes • tool selection (METT, RAPPAM, MPA scorecard etc.) • completing assessment reports, report cards, GD-PAME, linking data to management decisions PA Sustainability • PA management and planning • Financial management • Legislation and enforcement • Advocacy, communication, outreach
Learning resources	• Evaluating effectiveness – a framework for assessing management effectiveness of protected areas (second edition)

	• Management effectiveness evaluation in protected areas – a global study (second edition)
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Module title	4.3 Socioeconomic Monitoring
Module description	This module provides a detailed guide to Socioeconomic Monitoring (SocMon), the process of systematically collecting and analysing data on the human dimensions of MPAs. This is crucial for understanding how MPAs affect—and are affected by—the communities, economies, and cultures that depend on them.
Learning outcomes	Upon successful completion of the course, learners will be able to: • Understand what socioeconomic is • justify the need for socioeconomic monitoring of MPAs • identify and explain the benefits gained from socioeconomic monitoring • analyse the status of SocMon based on its history and trends • complete a socioeconomic assessment based on the SocMon Caribbean process • evaluate which socioeconomic variables are suitable based on the context • communicate assessment data and link it to management decisions • identify and mitigate challenges where possible
Module content	The following topics will be addressed: Concepts and terminology • socioeconomic monitoring Rationale • identification of threats, problems, solutions, opportunities, importance and value of resources, assessing impacts, building stakeholder participation, establishing baselines Status • history, distribution, trends Monitoring • process (goal setting, preparatory activities, data collection, data analysis, communication and adaptive management), SocMon, SocMon spatial Data, analysis and communication • variables, sources, linking data to management decisions Challenges • funding resources, capacity, willingness, attitudes and perceptions
Learning resources	• Socio-economic Conditions in the Caribbean: Scrutinizing SocMon Caribbean Data

	• <u>Socioeconomic monitoring guidelines for coastal managers in the Caribbean</u> • <u>Spatial socio-economic monitoring for Coastal Management (SocMon Spatial) guidelines</u>
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Module title	5.1 Stakeholder Engagement
Module description	This module explores the vital process of stakeholder engagement given the need to involve individuals, groups, organizations and communities who have an interest in or are affected by an MPA. The module emphasizes that effective and equitable conservation outcomes depend on integrating the diverse knowledge, concerns, and rights of resource users and local communities. Learners will be equipped to design, implement, and evaluate participatory processes, ensuring that MPA management decisions are legitimate, socially equitable, and lead to increased compliance and long-term conservation success.
Learning outcomes	Upon successful completion of the course, learners will be able to: • identify and understand key concepts and terms related to stakeholder engagement • evaluate engagement best practices to increase the legitimacy and compliance of MPA regulations • select the most appropriate method and means for engagement based on target audiences and available resources • identify and mitigate challenges where possible
Module content	The following topics will be addressed: Concepts and terminology • stakeholder, rightsholder, community, engagement, stakeholder analysis, stakeholder mapping, local knowledge, co-management, gender representation

Module title	5.1 Stakeholder Engagement
	Key principles for effective and equitable engagement • be proactive, be clear about purpose and terms, speak to the community's concerns, clear expectations, be responsive, be inclusive, respect for local knowledge and culture Engagement methods and means • information provision, information sharing, consultation, participatory design • interview, group discussion, survey, interpretive media/materials/techniques, visuals, creative and interpretive writing, workshops, seminars, field trips • communications (high impact, modern, youth education programs, community programs) Evaluating stakeholder engagement • measuring participation rates, feedback quality, sentiment, and behaviour changes against established KPIs Challenges to community engagement and how to overcome them • communication, involvement, representation, resource limitations, power relations, managing grievances and conflicts, social exclusion
Learning resources	• <u>Case study on the use of participatory three-dimensional modelling to facilitate effective contribution of civil society in the Caribbean islands in planning for action on climate change</u> • <u>Engaging communities in MPAs: concepts and strategies from current practice</u> • <u>Engaging our communities – a media relations social media communications toolkit</u> • <u>Facilitating participatory natural resource management. A toolkit for Caribbean Managers</u> • <u>Guidelines on Consultation and Stakeholder Engagement in IDB projects</u> • <u>Giving Voice to the Invisible Through the Use of Participatory Videos to Communicate Community-level Vulnerability to Pelagic Sargassum Influxes in the Eastern Caribbean</u> • <u>Stakeholder Engagement Strategy for Civil Society and Private Sectors (Discussion Draft)</u>

Module title	5.2 Conflict Resolution
Module description	This module addresses the inevitability of conflict in resource management and provides essential frameworks and strategies for effective Conflict Resolution within and around MPAs.
Learning outcomes	Upon successful completion of the course, learners will be able to: • identify and understand key concept and terms related to conflict resolution • analyse the root causes of conflict based on the type of conflict • incorporate the key principles to ensure resolution is fair and respectful • sequence and apply the conflict resolution framework • navigate appropriate strategies for dealing with conflict
Module content	The following topics will be addressed: Concepts and terminology • conflict, resolution, dialogue, stakeholder Types of conflicts • intergroup conflicts, conflicts arising from exclusion or marginalisation, poor communication, inequities

	Key principles • focus on underlying interests, involve all significantly affected stakeholders in a fair and respectful process, recognise and navigate stakeholder power dynamics Framework • getting started/determining roles, assessment, involving affected stakeholders, implementation and evaluation Strategies for dealing with conflicts • negotiation, mediation, litigation/arbitration, adaptive zoning/regulation
Learning resources	• Managing conflicts in PA • Understanding and Managing Natural Resource Conflicts

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Key existing MPA capacity building programs include the Caribbean Marine Protected Areas Network and Forum (CaMPAM), MPACONnect, the International Union for the Conservation of Nature (IUCN), previously the Biodiversity and Protected Areas Management (BIOPAMA) Programme which has now been replaced by the Communities, Local Outcomes & Regional Science (COLOURS) Project and the Socioeconomic Monitoring for Coastal Management in the Caribbean (SocMon Caribbean).

(CaMPAM) has been the primary regional platform dedicated to strengthening the management of Marine Protected Areas (MPAs) across the Wider Caribbean since being established in 1997. It has operated under the framework of the SPAW Protocol (Specially Protected Areas and Wildlife) of the Cartagena Convention, coordinated by the UN Environment Programme's Caribbean Environment Programme (UNEP-CEP). CaMPAM's flagship capacity building initiative has been the Training of Trainers (ToT) Program which started in 1999 (see table below). It is reported that the initiative has trained over 240 MPA managers directly, who in turn have reached more than 1,600 stakeholders through local follow-up activities.

Table Timeline of CaMPAM ToT programs conducted

Year	Location
1999	Saba
2000	Dominican Republic
2002	Saint Lucia
2004	USA
2006	USA

2007	Mexico
2009	Trinidad & Tobago
2010	Dominican Republic
2011	Belize
2015	Grenada
2016	Dominican Republic
2017	Guadeloupe
2018	Barbados
2024	Barbados

The curriculum employed through the CaMPAM ToT program generally covers the full spectrum of MPA management, including:

- MPA Planning and Design
- Ecosystem-based Management (EbM)
- Stakeholder Engagement
- Socioeconomic Monitoring
- Research and Monitoring
- Financing and Sustainability
- Communication and Teaching Skills

MPAConnect is a specialized learning network designed to enhance the management effectiveness of MPAs across the Wider Caribbean. Established in 2010, it is a flagship partnership between the Gulf and Caribbean Fisheries Institute (GCFI) and the U.S. National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Program. MPAConnect focuses on the practical, day-to-day technical needs of MPA managers on the ground, and thus has a wealth experience on the practical side of things.

Table Timeline of MPAConnect workshops conducted

Year	Topic	Location
2011	Sustainable Finance Strategies for MPAs	Puerto Morelos, Mexico
2012	MPA Enforcement & Compliance	Santa Marta, Colombia
2014	Socio-Economic Monitoring (SocMon)	Bridgetown, Barbados
2015	Outreach and Education	Panama City, Panama
2016	Bio-Physical Monitoring	Grand Cayman, Cayman Islands
2017	Fisheries Management in MPAs	Merida, Mexico
2018	Sustainable Financing II (Business Planning)	San Andres, Colombia
2019	Stony Coral Tissue Loss Disease (SCTLD)	Key West, USA
2021	Coral Rescue and Restoration	Virtual (Due to COVID-19)
2024	Caribbean Coral Rescue & Restoration Roadmaps	Key West, USA
2025	Third Meeting of the MPA Networks	Cartagena, Colombia

A signature feature of MPAConnect is its regional workshops (see table below), which emphasize ‘learning-by-doing’ and horizontal exchange between colleagues. Key thematic areas of focus include:

- Sustainable Finance
- MPA Enforcement
- Monitoring (socioeconomic and biophysical)
- Outreach and education

- Fisheries Management

It must be noted that both CaMPAM and MPAConnect offer financial support to trainees through established grant mechanisms. The Training of Trainers (ToT) grants are specifically designed to turn individual learning into institutional and community-wide capacity while the MPAConnect grants are implementation-focused, designed to address the highest priority gaps identified in a site's Management Capacity Assessment.

The BIOPAMA programme was a global initiative that concluded its second phase (2017–2024/25) with a significant legacy in the Caribbean. In the Caribbean, the BIOPAMA programme functioned to provide a combination of open-source data tools, capacity building, and direct “on-the-ground funding. The central pillar of BIOPAMA in the region is the Caribbean Protected Areas Gateway (CPAG), which was hosted by the University of the West Indies (UWI-CERMES) in Barbados, but is now transitioning to the Organisation of Eastern Caribbean States (OECS) Commission. The BIOPAMA programme has facilitated the enhancement of capacities of hundreds of practitioners in the Caribbean in areas such as data management and Protected Area Management Effectiveness (PAME) Assessments (see table below).

Table Timeline of IUCN-ORMAC (BIOPAMA) PAME trainings conducted

Year	Event Type	Location
2018	Regional Workshop	Saint Lucia
2018	National Workshop	Antigua and Barbuda
2018	National Workshop	St. Vincent and the Grenadines
2020	National Workshop	Saint Lucia
2020	Site Assessment	Barbados
2022	Site Assessments	Belize
2024	Global Forum (SIDS4)	Antigua and Barbuda

The IUCN COLOURS Project is a five-year global initiative launched in late 2024 to strengthen biodiversity conservation by bridging the gap between local community action and high-level regional science. It builds on the decade-long legacy of the BIOPAMA programme, and will focus heavily on:

- OECM Recognition: helping Caribbean nations identify and formally recognize OECMs, areas outside of formal MPAs that still achieve effective conservation.
- Policy Advocacy: working with CARICOM and the OECS to integrate science-policy tools into national reporting for the 2030 global biodiversity targets.
- Capacity Building: providing technical training for MPA managers and community leaders on governance, equity, and human rights-based approaches to conservation.

SocMon Caribbean is a globally networked, regionally adapted methodology designed to help coastal managers understand and incorporate the human dimension into marine resource management. It serves as the socioeconomic “arm” of the Global Coral Reef Monitoring Network (GCRMN) and is primarily coordinated in the region by UWI-CERMES (see table below for trainings and assessments conducted). In the Caribbean, SocMon has moved beyond simple data collection to include “SocMon Spatial,” which integrates participatory GIS to map exactly where human activities occur relative to sensitive ecosystems. This helps managers visualize “hotspots” of human-nature interaction.

Table Timeline of SocMon trainings and assessments conducted

Year	Country	Site
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2005	Jamaica	Negril Marine Park
2005/2006	Jamaica	Montego Bay Marine Park
2005/2006	Anguilla	Shoal Bay/Island Harbour Marine Park
2005/2006	Antigua and Barbuda	Cades Bay Marine Reserve
2005/2006	Grenada	Sandy Island/Oyster Bed MPA
2005/2006	St. Lucia	Soufriere Marine Management Area
2009/2010	St. Kitts and Nevis	The Narrows
2011-2013	Grenada	Sandy Island/Oyster Bed MPA
2011-2013	Grenada	Molinière/Beauséjour Marine protected Area
2011-2013	Grenada	Woburn/Clarke's Court Bay MPA
2011-2013	St. Lucia	Pointe Sable Environmental Protection Area
2011-2013	St. Lucia	Soufriere Marine Management Area (SMMA) and the Pitons Management Area (PMA)
2011-2013	St. Vincent and the Grenadines	South Coast Marine Conservation Area
2011-2013	St. Vincent and the Grenadines	Tobago Cays Marine Park
2013-2014	Turks and Caicos Islands	Princess Alexandra Land and Sea National Park
2013-2014	Turks and Caicos Islands	West Caicos Marine National Park
2013-2014	Turks and Caicos Islands	Columbus Landfall National Park
2016-2017	Antigua and Barbuda	Northeast Marine Managed Area (NEMMA)
2016-2017	Dominica	Cabrits National Park (Marine Component)
2016-2017	Grenada	Grand Anse Marine Protected Area
2016-2017	St. Kitts and Nevis	The Narrows
2019	Antigua and Barbuda	Nelson's Dockyard National Park

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Traning Module/Topic	
1	Legal Aspects of National Parks Law Enforcement
1.1	Code of conduct for enforcement officers - understanding constitutional rights/freedoms of private persons, appreciation for responsibilities of enforcement officers
1.2	General rules of criminality and principles of enforcement - Understanding principles of enforcement - presumptions, liabilities, adjudication , suspicions
1.3	Relevant Laws and Regulations - identifying offenses - points to prove (knowing penalties, fines)
1.3.1	Mooring use, permits/fees, mooring field closures
1.3.2	No anchoring
1.3.3.	No take
1.3.4	Species management
1.3.5	Discharge of harmful substances
1.3.6	Defacing or other damage to park facilities
1.3.7	Removal of persons from park, Offensive & disorderly conduct
1.3.8	Special use of parks & Inspecting of licenses
1.3.9	Prohibited activities in marine parks
1.3.10	Groundings
1.4	National Parks Act and Regulations - identifying offenses
1.5	National Parks warden powers of enforcement
1.6	Transparency and anti-corruption
Traning Module/Topic	
2	Communications
2.1	Customer care
2.2	Interpretive enforcement
2.3	Conflict resolution
2.4	Team building, leadership skills
2.5	Enforcement program data keeping
2.6	Media relations policy

Traning Module/Topic	
3	Responding to a violation
3.1	Surveillance and tactical operations
3.2	Vessel approach
3.3	Boarding
3.4	Inspection
3.5	Judge's rules
3.6	Ticketing
3.7	Arrest
3.8	Charge procedure
3.9	Seizure
3.10.	Use of force
Traning Module/Topic	
4	Case preparation
4.1	Official pocket book
4.2	Report writing
4.3	Interview techniques, statement taking, questioning witnesse
4.4.	Evidence collection and exhibit handling
4.5	Minor crime scene investigation
4.6	Damage assessment
4.7	Court procedures
4.8	Classification of courts and their functions
Traning Module/Topic	
5	Officer Safety
5.1	Verbal judo
5.2	Approach, public greeting, officer ID, stance, separation
5.3	Situational awareness, scanning, observation and perception
5.4	Reading body language
5.5	Safety gear
5.6	First aid and CPR
5.7	Life saving/water rescue/swimming skills
5.8	VHF radio communications
5.9	Self-defense including buddy teamwork, baton use

Traning Module/Topic	
6	General skills
6.1	Navigation, GPS, chart reading
6.2	Boat handling
6.3	Engine maintenance
6.4	Other IT e.g. SMART
6.5	Boat captain licence