

Supporting the Integrated and Effective Management of the SoNG MPA

Training Manual

Responsible & Evidence-Informed MPA Management for Decision-Makers in Bangladesh

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1. Training Concept and Development

Background

While Bangladesh has declared five marine protected areas (MPAs) since 2000, their effective management remains largely unachieved. Timely access to relevant monitoring data for decision-makers, coordinated and adequately resourced efforts between institutions involved in MPA management, effective rights for direct users and other local stakeholders, and capable and informed (co)managers and stakeholders are crucial conditions for an integrated and effective management of MPAs in Bangladesh.

This training manual was produced in the context of "Supporting the Integrated and Effective Management of the SoNG MPA" (SoNG Support), a project implemented by the Leibniz Centre for Tropical Marine Research (ZMT) in Bremen, Germany from May 2024 until June 2025. The SoNG Support Project is an endeavour within the larger project "Integrated management of the Sundarbans Mangroves and the Marine Protected Area 'Swatch of No Ground' (SoNG)", an initiative of the Ministry of Environment, Forest and Climate Change (MoEFCC) in Bangladesh, implemented by the Bangladesh Forest Department (BFD), the Department of Fisheries (DoF), and GIZ Bangladesh, and funded by the German Federal Ministry of Economic Cooperation and Development (BMZ).

The SoNG Support Project involved a package of measures, including participatory and inclusive stakeholder consultations, as well as the collaborative preparation and piloting of a course with tailored training material. Thereby, we strived to support the development of relevant measures for a sustainable and equitable management of the SoNG MPA and other MPAs in Bangladesh, complementing existing engagements in the region. Based on insights gathered during the pilot trainings and feedback from participants, this training manual includes:

- a) A course curriculum that includes (i) an introduction into MPA planning as a process embedded in wider Marine Spatial Planning; (ii) an exploration of stakeholder recognition and engagement; (iii) an overview of essential skills, methodologies, and variables needed for effective management and monitoring of MPAs in Bangladesh and the SoNG MPA in particular
- b) Recommendations and materials to support future training implementation and the Training of Trainers (ToT)

This training manual contributes to the overarching project objectives:

- (1) Taking into account the outcomes of consultative processes with relevant actors, all stakeholders are identified and motivated to jointly contribute to the management of the SoNG MPA and other MPAs in Bangladesh.
- (2) Local fishing communities and, if applicable, other marine resource user groups, are continuously informed about MPA planning and decision-making processes, and their rights in these, included in MPA management, and informed about and able to interpret the results of MPA monitoring.
- (3) The capacity of relevant actors to monitor, safeguard, and manage the SoNG MPA and other MPAs in Bangladesh is improved. Official representatives from different stakeholder groups (i.e., from BFD, DoF, MoD, BN) will have taken part in a first set of MPA management courses.

Training Design

The steps toward developing the training are described in more detail in the section below. A conceptual map of the course design is shown in Figure 1 below.

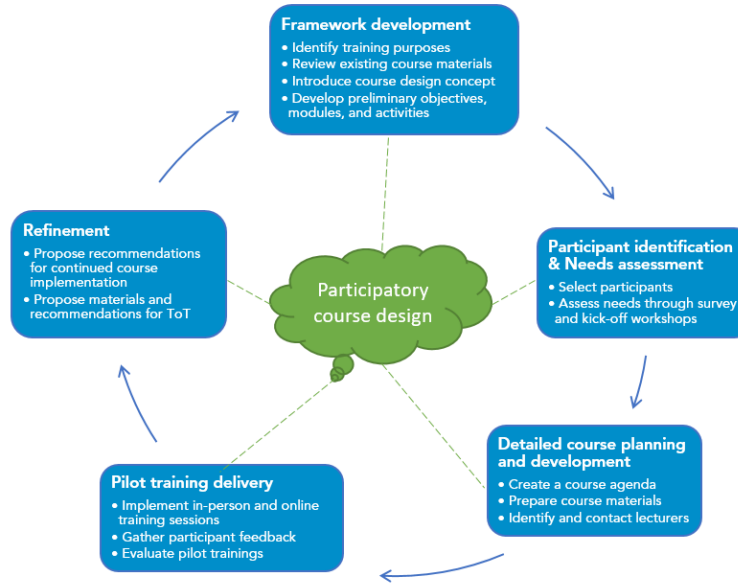


Figure 1: Course design conceptual map

Step 1: Develop a training framework

Training purposes and expected outputs were discussed in several preparatory meetings between ZMT and GIZ and align with the project objectives as identified in the project agreement. Based on this, existing course materials and previous training concepts (e.g., GIZ Indo-German Biodiversity Programme, 2015; Zhang et al., 2024) were reviewed to prepare a course design concept and framework for the SoNG Support Project.

A preliminary course framework was developed based on a general understanding of the skills and knowledge needed for MPA management. This general understanding was informed by the (draft) management plans of the SoNG MPA and other MPAs in Bangladesh, as well as pertinent literature (e.g., Pomeroy et al., 2004; FAO, 2015; UN Environment, 2019; UNESCO-IOC & UNESCO-LINKS, 2024). Possible training approaches and activities were drafted based on experience from previous courses. The overall training objective was to enhance participant’s abilities to effectively and equitably manage, enforce, and monitor the SoNG MPA and other MPAs in Bangladesh under engagement of all relevant stakeholders.

Step 2: Identify participants and assess their needs

The training targets high-level decision-makers (policy leaders for MPA legislation and planning) as well as implementation decision-makers (responsible for MPA management, monitoring, and enforcement). While officials of BFD/MoEFCC and DoF/MoFL are primarily responsible for declaring and managing MPAs in Bangladesh, the representation of a broad range of ministries and departments that could play an important (albeit indirect) role for successful MPA implementation was considered important.

A list of potential participants for both groups was produced drawing on the expertise of our project partner GIZ, as well as our own experience and networks from previous engagements in the region. For the kick-off workshops and pilot training, officials were nominated by their respective ministry or department upon formal request by GIZ. Other workshop and training participants were contacted directly. Participants' backgrounds, and their training needs, preferences, and goals were assessed during three kick-off workshops held in Bangladesh in November and December 2024¹. Specific training and learning objectives were defined upon evaluating results of the kick-off workshops.

Step 3: Create agenda, select materials and lecturers

Based on insights of the kick-off workshops, a modular training agenda was developed, including objectives, methods, and content ideas for each module. This preliminary course agenda was shared with experts in Bangladesh who were involved and/or identified during the kick-off phase, including people from various organisations and research institutions. In February and March 2025, three online meetings and the option to provide written feedback were offered to these experts to give feedback to the preliminary course agenda and to propose resource persons and ideas. Training contents were also developed in close cooperation with the Public One consulting team and under consideration of their activities in the region. Additionally, seven focus group discussions were conducted with small-scale fishers, fish workers, and boat owners in Chattogram, Bhola, Patuakhali, and Patharghata in March, to learn about their awareness and perceptions of training programs for small-scale fishers and fish workers in coastal communities. Results were discussed with a small group of experts from NGOs and academia with experience in community engagement and capacity building, before the pilot training in Dhaka in April 2025. These insights served to refine the module on capacities and livelihoods. For the training, experts from Bangladesh and from ZMT were contacted based on their expertise and availability for in presence and/or online sessions. Lecturers prepared their materials in close cooperation with the organising team and in accordance with the training objectives. The organising team further developed handouts and selected preparatory reading materials where appropriate and needed.

Step 4: Deliver pilot trainings

Out of six modules, two were delivered in person during a second stay in Bangladesh in April 2025. This included two full-day sessions in Dhaka for Module 1 and two full days at the *International Conference on Marine Spatial Planning (MSP) for Advancing Sustainable Blue Growth* at Shahjalal University of Science and Technology (SUST) for Module 2. Due to time and budget constraints, the remaining four modules were delivered as online sessions in May 2025. An online survey was used to assess training preferences for the portion of the training that was delivered online. Reflections and recommendations resulting from the pilot training implementation² can be found in Appendix A. Materials used for the pilot training are available in the course platform of ZMT Academy³.

Step 5: Refine training contents and methods

Upon completing the pilot training, participant feedback was reviewed to further refine training contents and adapt where necessary. The resulting training framework, including recommendations for implementation, is described in the following section. An example of the module evaluation forms is included in Appendix B.

¹ Conducting a training needs assessment with designated pilot training participants was not feasible, as most participants were only nominated shortly before the pilot training.

² A detailed account of implementing elements of this manual in the pilot training is available on request.

³ Access the course via <https://academy.leibniz-zmt.de/> in the 'past courses' section. Guest access is possible using the password 'SoNG2025'.

Citations

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Zhang, J., Ferse, S. C., Jennerjahn, T. C., Clausen, A., & Lahl, R. (2024). Co-design capacity development for the UN ocean decade. *Frontiers in Ocean Sustainability*, 2. <https://doi.org/10.3389/focsu.2024.1252087>

Further Useful Training Resources

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GAIA. (2015-2017). Toolkits for Transdisciplinarity series, available at https://www.oekom.de/uploads/media/files/gaia_flyer_toolkits_032911.pdf

Td Academy. (2015-2019): *Toolbox of Methods for Transdisciplinary Research*, available at https://td-academy.org/downloads/Toolbox_EN.pdf

2. General Training Framework

The training is developed in a modular structure, in which Module 1 serves as a foundation on which the further modules may build. Based on interest and training needs of participants, further modules can be conducted for a deeper engagement and specialisation in specific topics, as shown in Figure 2.

This section outlines training objectives, benefits, and recommendations for training implementation.

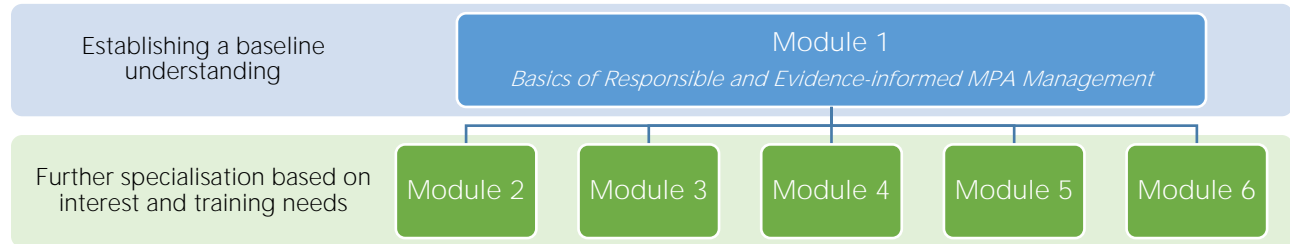


Figure 2: Modular structure of training curriculum

Training Objectives

The overall training objective is to enhance participants' abilities to effectively and equitably manage, enforce, and monitor the SoNG MPA and other MPAs in Bangladesh with engagement of all relevant stakeholders. The target audience of this training includes policy-makers, planners, and implementers responsible for MPAs in Bangladesh. An important aspect of the training design is to bring together decision-makers from different levels of governance or management, who do not regularly interact, thereby creating spaces for engagement and learning from different perspectives.

1. Participants gain a foundational understanding of MPAs, their objectives and challenges, and learn to contextualize the role of MPAs within broader conservation, fisheries, and socio-economic conditions.
 - 1.1. Participants learn to address coordination challenges among authorities, stakeholders, and sectors relevant for MPA management in Bangladesh within and across levels of governance, to foster effective collaboration and minimize conflicts.
 - 1.2. Participants learn to critically analyse MPAs in regard to their effectiveness and equity, considering ecological, social, and economic factors, and reflecting on the necessary trade-offs in achieving multiple, often competing, goals.
 - 1.3. Participants learn about data and information needs for effective and fair MPA planning and management, i.e., types of data that need to be collected, the various ecological, social, and economic impacts that need to be assessed, and actors that need to be involved and informed.
 - 1.4. Participants obtain a strategic understanding and learn about practical approaches the establishment of new, effective MPAs in Bangladesh as well as the critical transition of existing MPAs from legislative proposals to actively managed, impactful conservation sites.
2. Participants learn about different approaches to MPA governance, including top-down, co-management, and community-driven arrangements, and related opportunities and challenges. They are introduced to the concept of "good governance" and learn about its assessment and evaluation.

3. Participants learn about concepts and approaches to effectively integrate MPAs into broader MSP processes, ensuring sustainable resource use, minimising conflicts among different marine uses, and promoting equitable and efficient ocean governance.
4. Participants learn about effective data and information management strategies in MPAs, explore contextually adequate data and information sharing strategies, and become familiar with indicators for equitable and sustainable MPAs.
5. Participants learn to identify and analyse conflicts and trade-offs between different sectors and other actors with interests in marine resources, while promoting sustainable resource use and ensuring equitable benefits for all stakeholders within and around MPAs.
6. Participants learn about strategies to promote sustainable livelihoods for ecosystem users and implement targeted capacity-building programs, to ensure equitable and resilient outcomes for communities within the context of MPA management.

Training Benefits

This comprehensive training is designed to strengthen and broaden the knowledge and skills of a diverse group of decision-makers for effective and equitable MPA governance and management in Bangladesh. By bringing together policymakers and implementers from various government ministries, departments, and agencies, the training fosters collaboration, illuminates (potential) conflicts, and promotes a holistic understanding of MPAs within the broader conservation and socio-economic landscape. Participants will learn to critically analyse MPA effectiveness, integrate these areas into broader planning processes, and manage data and information efficiently. The programme also emphasises equitable outcomes by teaching strategies to promote sustainable livelihoods for coastal communities and by incorporating perspectives of local stakeholders, including small-scale fishers. This approach aims to promote sustainable MPAs that are socially and economically resilient, and ecologically sound.

General Recommendations for Training Implementation

To achieve the greatest training benefit, we recommend to actively recruit a diverse set of participants, including ministries and departments beyond the lead agencies for developing and implementing MPA management plans. While baseline trainings (Module 1) could be held regionally with involvement officers from Dhaka, or at national level in Dhaka with regional officers reporting from their district, specialisation modules should be conducted regionally, in districts close to the MPAs themselves. Nomination requests should be specific about expectations toward participants, for instance by provision of a brief concept note. During trainings, participants from different ministries or department should be in mixed groups to foster exchange.

Experts invited as lecturers or co-trainers should be carefully briefed about the daily agenda to make them aware of time limitations and of how exercises are related to their lecture input. When guest speakers propose exercises, the procedure and required materials should be thoroughly communicated beforehand to avoid delays during the training. Ideally, the organising team itself facilitates the exercise and prepares the technical set-up.

Training contents should be delivered in person whenever possible, ideally in combination with practical sessions such as visits to key institutions, hands-on workshops for training in specific monitoring or data management technology, or field excursions to landing sites or out to sea. Online sessions could be useful for lectures and panel discussions with experts located in different parts of Bangladesh or from abroad.

Training Target Group

The training targets high-level decision-makers (policy leaders for MPA legislation and planning) as well as implementation decision-makers (responsible for MPA management, monitoring, and enforcement). This includes officials of the Bangladesh Forest Department (BFD) and Department of Environment (DoE) under the Ministry of Environment, Forest and Climate Change (MoEFCC), Department of Fisheries (DoF) and Bangladesh Fisheries Research Institute (BFRI) under the Ministry of Fisheries and Livestock (MoFL), Bangladesh Navy (BN) under the Ministry of Defence (MoD), Coast Guard (CG) under the Ministry of Home Affairs (MoHA), Port Authorities (PAs) and Bangladesh Shipping Corporation under the Ministry of Shipping (MoS), Bangladesh Tourism Board under the Ministry of Civil Aviation and Tourism (MoCAT), Blue Economy Cell under Cabinet Division of Ministry of Cabinet Affairs (MoCA), the Ministry of Power, Energy and Mineral Resources (MPEMR), Planning Commission (PC) under the Ministry of Planning (MoP), Department of Social Services under the Ministry of Social Welfare, and other relevant ministries. While officials of BFD/MoEFCC and DoF/MoFL are primarily responsible for declaring and managing MPAs in Bangladesh, the representation of a broad range of ministries and departments that could play an important (albeit indirect) role for successful MPA implementation was considered important.

Key Resource Organisations for Implementing Trainings and Training of Trainers

For further development and implementation of trainings, we recommend to closely collaborate with various actors and institutions from academia, research institutes, and NGOs in Bangladesh.

Universities such as Bangladesh Agricultural University, Dhaka University, Khulna University, Patuakhali Science and Technology University, Shahjalal University of Science and Technology, Sylhet Agricultural University, University of Chittagong, or University of Liberal Arts Bangladesh host scientists with a broad range of expertise who could support trainings as lecturers, co-trainers, and panellists. Some of these institutions could also be established as regional hubs to host training activities and Training of Trainers. In a similar manner, research institutes such as BIMRAD or BORI could be involved in the planning and implementation of trainings, providing their topical expertise and drawing on their professional network to identify and contact further stake- and knowledge holders.

Local and international NGOs such as Arannayk Foundation, BEDS, CNRS, COAST Foundation, CODEC, IIED, IUCN, WCS, WorldFish offer valuable expertise in implementing conservation, social welfare, and citizen science projects in coastal communities. They can often draw on longstanding relationships with local stakeholders and could facilitate the inclusion of local voices and perspectives in training activities. Moreover, some of these organisations could be key intermediaries to build relationships with authorities that are not directly responsible, yet important, for MPA management (e.g., ministries and departments related to national coordination, planning, tourism, or social services and welfare), and facilitate their involvement in trainings.⁴

⁴ An initial list of resource persons from these institutions and organisations, that can serve as an initial starting point, is available on request.

Involving Small-Scale Fishers in Trainings

Including the voices of coastal communities and the small-scale fishing (SSF) sector can be an extremely valuable addition to trainings and was a frequent suggestion by participants of the Pilot Training. SSF representatives (small-scale fishers, fish and value chain workers, or boat owners) contribute relevant local ecological knowledge and can potentially share experiences from participation in citizen science projects or co-management arrangements. They further provide an important stakeholder perspective for MSP and MPA planning processes and design of alternative livelihood programmes, as well as for evaluation and adaptation once these interventions have been implemented. While this training does not target SSF representatives as a participant group, they could be invited as guests and local experts. Another option is to include field visits to coastal communities to exchange about a specific topic as a training activity.

However, it can be difficult to create a setting that simultaneously meets the expectations and standards of high-level government officials and also accommodates community representatives in a respectful manner and on eye-level. Trainings organised in Dhaka usually take place in upscale hotels and require long travel distances and associated costs for community/SSF representatives. Even if these costs are compensated, such a setting creates high barriers for participation and various power imbalances that impede a meaningful inclusion of all participants. For trainings in Dhaka, it might thus be more suitable to invite NGO representatives that closely work with communities. Involving SSF representatives in regional trainings organised in closer proximity to coastal communities might be more feasible, given an appropriate setting can be provided. This may include, for instance, a training location or meeting place in which SSF representatives feel like they belong and are welcome, English-Bangla translations of materials and spoken contributions, or careful anticipation and mediation of potentially conflictual topics. Particular efforts should be made to include women and youth, as their perspectives often remain under-represented.

All modules outlined below allow for the inclusion of SSF representatives as guests or a field visit to coastal communities for parts of the training content, especially the specialised modules addressing sustainable livelihoods and resilient fisheries. The focus group discussions with small-scale fishers, fish workers, and boat owners in Chattogram, Bhola, Patuakhali, and Patharghata, that were conducted in preparation of the pilot training, yielded important insights that may be addressed in these modules.

Most focus group participants reported limited exposure to training programmes, with the exception of few who received training in gear handling and first aid. Participants further pointed unequal access to trainings, as these are usually conducted with the same few individuals (gate-keepers) in a community. Regarding training preferences, most participants would appreciate hands-on sessions in a local language and incorporating interactive methods. Some favoured training topics include sea safety, weather alerts, and modern fishing gear. Focus group participants were further interested to receive long-term, practical trainings that enable them to diversify their livelihood through supplementary income, for instance in fish drying, crab farming, and eco-tourism. Common barriers for pursuing these occupations include the absence of capital and limited technical know-how. Focus group participants had a limited understanding of current fisheries laws and conservation rules in Bangladesh and in their region. Many are confused about restricted zones and penalties for disregarding regulations, showing the need for broad legal awareness campaigns in accessible formats. Participants mentioned a lack of trust in short-term or one-off programmes, language and literacy limitations, as well as poor timing that conflicts with fishing seasons as barriers to effective training. They propose to schedule trainings during off-season, to engage community facilitators and local leaders, to provide ongoing mentorship instead of one-time events, and to ensure follow-ups and evaluations of training programmes. Governmental decision-makers and those implementing trainings are advised to develop SSF-specific content on laws, safety, and alternative livelihoods, to incorporate local voices and peer educators into trainings, and to design inclusive and trust-building programmes.

3. Recommended Training Curriculum

The modules outlined below can be used as building blocks for a needs-based training design. Module 1 serves as a general foundation that can be complemented with specialisation modules. Course materials used in the Pilot Training⁵ might be used, adapted, or serve as guidance for developing new materials.

Module 1: Basics of Responsible and Evidence-informed MPA Management

Duration: 3-4 full days, may be complemented by field visit(s)

Maximum number of participants: 30 people

Number of facilitators needed: 4-6 people

Target group: National policy-makers and regional implementation officers responsible for developing and implementing MPA management plans and action plans (beyond lead agencies)

1.1 MPAs in Context

Objectives:

- Participants learn about the situatedness of MPAs in broader coastal and marine governance and planning, and intersections with conservation, fisheries, and blue economy activities/objectives.
- Participants learn about MPAs in Bangladesh, as well as related national laws and activities, regional networks, and international agreements.
- Participants learn about potentials and challenges of transboundary approaches, such as Regional Seas and Large Marine Ecosystems (LMEs), in Bangladesh and internationally.
- Participants reflect about the role of their own department/ministry/authority and the role of other decision-makers in MPA management (mandate, responsibility, interests, knowledge).

Contents:

- MPAs in relation to conservation, fisheries, and blue economy
- MPAs as tools or strategies within broader ICZM and MSP processes, and vis-à-vis OECMs
- Regional networks (i.e., BOBLME), MPAs in relation to international commitments
- MPAs in Bangladesh (SoNG, Nijhum Dwip, NAF, St. Martin's MPAs), relevant national laws
- MPA-related activities, projects, and actors in Bangladesh

Possible delivery methods: Short lectures, discussions, [NetMap Exercise](#)

1.2 Effective & Equitable MPAs

Objectives:

- Participants become familiar with issues of equity and justice in MPA management, focusing on rights and livelihoods of small-scale fishers and coastal communities.
- Participants learn to consider factors like stakeholder involvement, power dynamics, and potential ecological, social, and economic impacts of MPA management in Bangladesh.
- Participants learn about different kinds of incentives to increase buy-in, compliance, and participation of MPA stakeholders to foster the long-term sustainability of marine resources.
- Participants learn about opportunities and challenges for co-management and for involving coastal communities as decision-makers/ecosystem stewards in MPA management activities.

⁵ Access available on request.

Contents:

- Equity and justice in MPA management (rights and recognition of SSF, impact on livelihoods in coastal communities, FAO VGSSF), equity as necessary condition for sustainability
- Incentives that foster or impede MPA sustainability, avoiding “paper parks”
- Current practices and possibilities for co-management in MPAs in Bangladesh

Possible delivery methods: Short lectures, discussions, [Incentive Identification Exercise](#)

1.3 Information for Effective MPA Management

Objectives:

- a) Participants learn about different types of data required for effective MPA management in Bangladesh, including biodiversity data, compliance data, and socio-economic data in MPAs.
- b) Participants learn about the different meanings that “monitoring” can have in the context of MPA management (control and surveillance of regulation compliance for enforcement vs. assessing sustainability indicators for research and evaluation).
- c) Participants learn about indicators, data collection methods, and infrastructure needed for different kinds of monitoring for informed MPA management.
- d) Participants identify opportunities for enhancing information sharing and fostering collaborative decision-making processes among authorities/stakeholders.

Contents:

- Monitoring (control and surveillance) vs. monitoring (impact indicators and evaluation)
- Types of data, indicators, data collection methods, and infrastructure needed for different kinds of monitoring for informed MPA management
- Sharing information within and across agencies, departments, and ministries in Bangladesh

Possible delivery methods: Short lectures, discussions, [Monitoring Needs Exercise](#)

1.4 MPA Stages: From Establishment to Active Management

Objectives:

- a) Participants learn to identify and apply key suitability criteria for establishing new MPAs within the coastal areas of Bangladesh.
- b) Participants comprehend the critical stages of MPA development, from initial proposal to achieving active and impactful management, including strategies to avoid “paper parks”.
- c) Participants practice formulating practical pathways and strategies for effective implementation and strengthening of existing MPAs in Bangladesh.

Contents:

- Criteria and methods for MPA site suitability assessments, examples from Bangladesh
- Stages of MPA establishment, pathways from declaration to active management, factors for effective/successful MPAs
- Categories and protection levels of MPAs

Delivery methods: Short lectures, discussions, [Implementation Pathway Exercise](#)

Specialisation Modules

Specialisation modules do not have to be conducted in a particular order and can be chosen based on interest and applicability to their work. While some modules are mostly tailored to regional implementors, they may also be of interest to higher-level policy-makers.

Multi-level Governance and Coordination for MPAs

Duration: Half day (3-4 hours), may be complemented by field visit

Maximum number of participants: 20

Number of facilitators needed: 3-4

Target group: National policy-makers and regional implementation officers responsible for developing and implementing MPA management plans and action plans (beyond lead agencies)

Objectives:

- Participants learn about key concepts and approaches in multi-level MPA governance.
- Participants discuss MPA governance challenges in Bangladesh, including coordination within and between ministries, with maritime defence and law enforcement, private sector parties, and coastal communities, as well as transboundary cooperation with neighbouring countries.
- Participants learn about key principles and indicators of "good governance" as applied to MPAs, and how to critically review good governance monitoring and evaluation mechanisms and capacities in existing MPA management plans in Bangladesh.

Content:

- Multi-level governance of MPAs and coordination across levels of governance (theory and application to context of Bangladesh)
- Coordination for MPAs in Bangladesh & beyond (across levels, sectors, authorities, stakeholders)
- **Concept and principles of "good governance" in MPAs, international examples**
- Indicators to monitor and evaluate good governance in MPAs (application to Bangladesh)

Delivery methods: Short lectures, group exercises and discussions, [Good Governance Indicator Exercise](#)

Spatial Planning and MPAs

Duration: Half day (3-4 hours), may be complemented by field visit

Maximum number of participants: 20

Number of facilitators needed: 3-4

Target group: National policy-makers and regional implementation officers responsible for developing and implementing MPA management plans and action plans (beyond lead agencies)

Objectives:

- Participants learn about zoning concepts within MPAs, including potential benefits, challenges, and best practices from international examples.
- Participants learn about approaches to effectively integrate MPAs into broader MSP, considering the broader marine environment, coordinating existing uses of marine areas, and addressing potential conflicts.
- Participants explore experiences from MPA governance and management in Bangladesh that can provide insights for the development and implementation of effective and equitable MSP.

Contents:

- MSP in broader coastal governance and blue economy contexts
- MPAs and OECMs in spatial planning and spatial planning in MPAs
- Equity and justice concerns in MSP
- Stakeholder engagement and collaborative approaches to (local) MSP

Delivery methods: Short lectures, panel discussion, [World Café + SWOT Analysis](#)

Information Management and Monitoring in MPAs

Duration: Half day (3-4 hours), may be complemented by field visit

Maximum number of participants: 20

Number of facilitators needed: 3-4

Target group: Regional implementation officers responsible for implementing MPA management plans and action plans (beyond lead agencies)

Objectives:

- a) Participants learn about international data management standards (FAIR and CARE principles) to improve the handling and sharing of data related to MPA management and are introduced to examples of (regional) information management strategies.
- b) Participants learn about major actors involved, and systems and tools used in MPA monitoring in Bangladesh.

Content:

- FAIR & CARE principles of data management
- Information management strategies (international examples)
- MPA monitoring in practice in the Bangladesh (actors, systems, tools).

Delivery methods: Short lectures, group exercises and discussions, [Information Management Strategy \(IMS\) Exercise](#)

Conflict Management and Sustainable Livelihoods in MPAs

Duration: Half day (3-4 hours), may be complemented by field visit

Maximum number of participants: 20

Number of facilitators needed: 3-4

Target group: Regional implementation officers responsible for implementing MPA management plans and action plans (beyond lead agencies)

Objectives:

- a) Participants learn to identify the objectives of different MPA-related sectors and to explore potential trade-offs and synergies between them.
- b) Participants learn about conflict resolution mechanisms and strategies for mitigating conflicts between different sectors with interests in marine resources.

- c) Participants learn to identify effective programs and incentives for building capacities for sustainable and resilient livelihoods among vulnerable groups (SSF, women, and youth) in coastal communities.
- d) Participants learn about challenges and benefits of increasing community involvement in MPA management, about conditions that support or hinder sustainable livelihood diversification, and about strategies for building mutual respect and trust and for resolving conflicts.

Contents:

- Identifying (potential) synergies, trade-offs, and conflicts in MPAs
- Addressing and managing conflicts, engaging MPA-related (involved/affected) actors
- Capacity-building for sustainable and resilient livelihoods of vulnerable groups (SSF/ women/ youth) in coastal communities in Bangladesh
- Strategies to strengthen mutual respect, trust, and collective action, and to promote social energy for sustainable human-nature relations

Delivery methods: Short lectures, panel discussion, [Capacity-Building Exercise](#)

MPAs & Resilient Fisheries

Duration: Half day (3-4 hours), may be complemented by field visit

Maximum number of participants: 20

Number of facilitators needed: 3-4

Target group: Regional implementation officers responsible for implementing MPA management plans and action plans (beyond lead agencies)

Objectives:

- a) Participants learn about fishing practices in Bangladesh, the perspectives of fishers regarding MPA management, and drivers for the use of illegal equipment.
- b) Participants learn about the ecosystem approach to fisheries management (EAFM) as holistic and adaptive approaches to manage coastal and marine ecosystems and increase social and ecological resilience.
- c) Participants learn about gear-specific impact on different species and explore options for gear-specific rules and regulations for sustainable fisheries management in (MPAs in) Bangladesh.

Contents:

- Fishery livelihood dynamics (especially small-scale fisheries)
- EAFM, finding common ground between biodiversity conservation and fisheries management for sustainable use; healthy, productive, and resilient ecosystems to sustain ecosystem services
- Gear-specific management options and existing approaches

Possible delivery methods: Short lectures, group discussions, [EAFM Plan Exercise](#)

4. Exercise Toolbox

A variety of exercises can be used for this training. In addition to the exercises in this toolbox, further exercises can be found in the recommended resources at the end of the section [Training Design](#).

NetMap Exercise

A NetMap exercise is a participatory mapping tool used to visualise and analyse networks of actors and their relationships within a specific system or issue. Participants collectively identify key actors (individuals, organisations, groups) involved in a particular area (e.g., a policy issue, a development project, a conflict). They then map out the connections between these actors, indicating the nature and strength of their relationships (e.g., funding, information sharing, collaboration, conflict). Participants may also assign attributes to each actor, such as their influence, interest in the issue, or resources. This visual representation helps to understand power dynamics, identify influential stakeholders, uncover gaps in collaboration, and develop strategies for intervention or engagement.

More information:

- Net-Map toolbox (by Eva Schiffer) available at <https://netmap.wordpress.com/>
- Bosch, C., Scheiterle, L., Birkenberg, A., Birner, R., & Yameogo, V. G. (2024). Net-map: Analyzing social networks and power relations. *Participatory research methods for sustainability - toolkit #10. GAIA - Ecological Perspectives for Science and Society*, 33(2), 250-253. <https://doi.org/10.14512/gaia.33.2.20>

Example of application in Module 1:

NetMap exercise part 1: Stakeholder identification in Bangladesh MPA management (80 minutes)

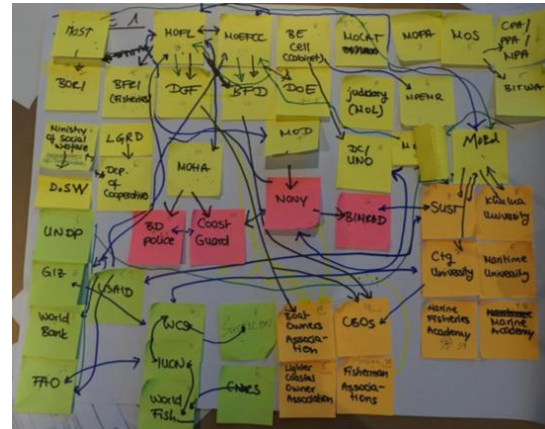
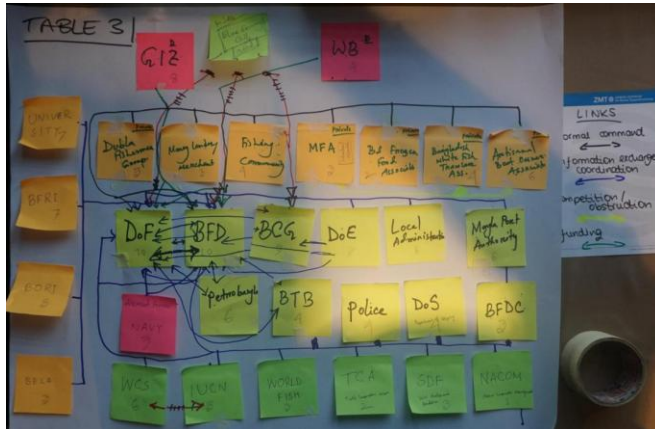
- Goal: Create buy-in and responsibility of representatives from all relevant authorities, even those without a direct mandate for MPA management; establish understanding of “what is”
- Setting: Small groups (4-8 people) on round tables, 1-2 facilitator(s) at each table
- Materials: Large sheets of paper, initial stakeholder map, markers in different colours, and sticky notes in different colours for each table
- Steps for creating NetMap (45 minutes):
 1. Using the provided initial stakeholder map, participants identify stakeholders for MPA management in Bangladesh, potentially adding actors as needed
 2. Participants identify mandates and responsibilities of these stakeholders for MPA management (potentially identifying where they overlap/complement each other)
 3. Participants identify different kinds of links between stakeholders (governance relations): *formal command; information exchange/coordination; conflict/opposition; funding*
 4. Participants identify levels of influence⁶ (1-10) in these relationships
- Presentation of results and discussion (40 minutes)

NetMap exercise part 2: Expected roles and desired links for managing the SoNG MPA (70 minutes)

- Goal: Applying identified governance relationships to a case example (SoNG MPA) and discussing “what should be”
- Materials: NetMaps from part 1, markers and sticky notes (new colour)
- Setting: Small groups (4-10 people) on round tables

⁶ Clarify whether influence refers to mandate or actual implementation, to the current situation or future potential, and to social influence or legal power.

- Steps for continued work on Netmap (30 minutes)
 5. Participants identify which links (governance relations) are desirable for sustainable and equitable management of the SoNG MPA (*formal command; information exchange/coordination; conflict/opposition; funding*)⁷
 6. Participants add missing links or alter those they find counter-productive
- Presentation of results and discussion (40 minutes)



Example of NetMaps produced during Module 1 of Pilot Training

Incentive Identification Exercise

This exercise is designed to identify and assess the diverse incentives at play within MPA governance structures. Based on the framework by Peter Jones et al. (2024), five key incentive types (economic, legal, participation, communication, and knowledge) are explored. Participants pinpoint which of these incentives are currently present (and absent) in a specific MPA context. This serves as a vital starting point for a deeper discussion on how these various incentives may influence MPA management practices, stakeholder engagement, and (un)sustainable behaviour of ecosystem users. This exercise is best combined with lecture input or reading material on equity and justice, incentives, and co-management.

Example of application in Module 1

Incentive Identification exercise for SoNG and Nijhum Dwip MPA (60 minutes)

- Goal: Participants identify and understand the presence and absence of various incentives in the context of SoNG and Nijhum Dwip MPA, and draw comparisons to inform strategies for improved governance and stakeholder engagement in both MPAs
- Setting: Small groups (4-8 people) on round tables, 1-2 facilitator(s) at each table; half of the groups work on SoNG MPA, the others on Nijhum Dwip MPA
- Materials: Large sheets of paper with prepared table for different incentive types, markers in 2 colours for each group table
- Supporting documents: Summary IMP-SoNG MPA, Nijhum Dwip MPA Governance Handout, Comparison of SoNG and Nijhum Dwip MPA Governance Structures, Overview of Incentive Types (based on Jones et al., 2024)
- Steps for exercise

⁷ Encourages participants to critically engage with available plans of the MPA in question, to enable considerations of (potentially) required adaptations for the achievement of desired outcomes.

1. Participants think about which incentives are present in the current governance structures of the MPA they are working on and note them down in the provided table (using one colour), using the supporting documents for assistance (25 minutes)
 2. Participants think about which incentives are absent but might be needed/useful for sustainable MPA management and note them down in another colour (15 minutes)
 3. Each small group gives a short presentation about their results (20 minutes)
- Discussion in plenary how existing and absent incentives might affect management, stakeholder engagement, and outcomes in the two MPAs and which incentives might be needed to improve MPA governance (30 minutes)

Example of table for incentive types

Economic	Legal	Participation	Communication	Knowledge

Monitoring Needs Exercise

This is a collaborative and interactive brainstorming exercise focused on monitoring needs for MPA management. The primary aim is to collectively generate a comprehensive list of what needs to be monitored and who is able/responsible for monitoring it, in order to assess MPA effectiveness and inform adaptive management decisions. Following the brainstorming, the generated ideas can then be discussed, refined, and prioritised based on relevance, feasibility, and available resources. Ideally, this exercise is combined with an introduction to different monitoring approaches, i.e., a) Monitoring, control, and surveillance (MCS) for enforcement and b) Monitoring for research and evaluation of ecological, social, and governance outcomes (indicators for MPA goals).

Example of application in Module 1

Exercise on data needs, contrasts, and synergies of different monitoring approaches in the SoNG MPA (90 minutes)

- Goal: Participants engage with the different understandings of monitoring and develop a holistic understanding of data needs for MPA enforcement and indicators
- Setting: Small groups (4-10 people) on round tables, 1-2 facilitator(s) at each table; groups are formed based on which approach (**enforcement or evaluation**) **relates most to participants' expertise, interest, or professional requirements**; ideally, this results in an equal number of groups for both approaches
- Materials: Large sheets of paper with prepared table for enforcement/evaluation data needs, markers, flip chart/poster wall
- Central question: "What is needed to achieve monitoring for enforcement and for evaluation of MPA goals in the SoNG MPA?"
- Steps for brainstorming about data needs (60 minutes)
 1. Participants address the central question for the approach they have chosen by discussing what kinds of data need to be collected, collection methods, infrastructure needed, who collects this data, who needs to be informed, and how data is shared; ideas can be noted in the provided table (30 minutes)

2. One enforcement and one evaluation group each⁸ get together to compare their results from Step 1, discuss contrasts and synergies between the different approaches and come up with a bigger picture of data collection and information sharing mechanisms needed for MPA management (30 minutes)
 - Presentation of results and discussion in plenary (30 minutes)

Example of table for enforcement/monitoring data needs

What kind of data?	Collection methods?	Infrastructure needed	Who collects data?	Who needs to be informed?	How is data shared?

Implementation Pathway Exercise

The success of MPAs depends not just on their legal establishment, but on their effective implementation and active management. This exercise is designed to focus on the stages that follow MPA designation. The goal is for participants to reflect about the current stage of establishment of the MPA(s) in question, and to discuss pathways or strategies into effective implementation and sustained active management. By exploring these pathways, one can gain a deeper understanding of the practical challenges and strategic solutions required to turn designated MPAs from "paper parks" into truly functional and impactful conservation tools. This exercise is best combined with lecture inputs on MPA establishment and further stages of development.

Example of application in Module 1

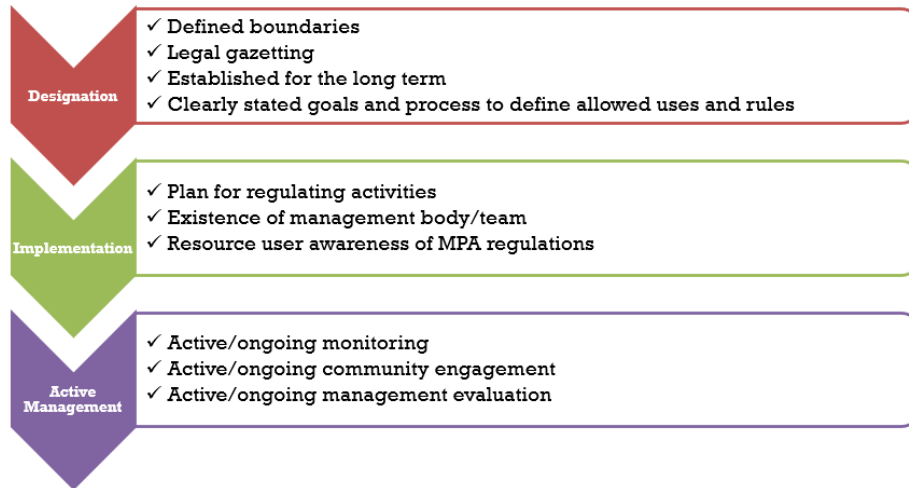
Implementation Pathway exercise for SoNG MPA (90 minutes)

- Goal: Participants identify the current stage of establishment of the SoNG MPA and discuss pathways and strategies toward implementation and active management
- Setting: Small groups (4-8 people) on round tables, 1-2 facilitator(s) at each table
- Materials: Large sheets of paper, paper for notes, and markers for each group table; overview of MPA stages as handout or projected on the wall
- Guiding questions for facilitators: What are the critical barriers that prevent SoNG MPA from becoming fully implemented? What strategies are most effective in raising awareness among resource users? How can the SoNG management committee secure the necessary resources for effective monitoring and enforcement? What are the best practices for transitioning from initial community consultation to sustained, active engagement? How can the SoNG MPA governance structure support adaptive management and long-term success?
- Steps for small group exercise (60 minutes)
 1. Participants review different MPA stages and determine the current stage of SoNG MPA
 2. Participants identify potential challenges and opportunities for moving into the stage of implementation/active management; if needed, facilitators may assist the discussion through guiding questions
 3. Participants brainstorm and list specific strategies for addressing the challenges identified in Step 1. For each strategy, they would consider a) Who needs to be involved? (e.g., local communities, government, NGOs), b) What resources are required? (e.g., funding,

⁸ If there is an uneven number of groups (e.g., two enforcement and one evaluation group), the minority group splits up and joins the other groups, so that each approach is represented in the mixed groups.

- technical expertise, legal authority), Why would this strategy be effective? (i.e., the expected outcome)
4. Participants map out steps for their proposed pathway in a timeline on a large sheet of paper, highlighting the strategies they find most crucial for achieving implementation/ active management
- Presentation of proposed pathways and discussion in plenary to identify common themes, innovative ideas, and potential roadblocks (30 minutes)

Stages of MPA establishment (as proposed by IUCN MPA Guide)



Good Governance Indicator Exercise

Good governance of MPAs in the Global South harmonises conservation goals with human needs, rights, and activities, with an emphasis on inclusion, balancing diverse interests, and adaptation to local realities. Indicators help MPA managers and stakeholders evaluate the effectiveness of conservation actions, track trends over time, and inform decision-making, with governance indicators assessing the effectiveness, transparency, accountability, stakeholder participation, enforcement, and overall quality of the systems and processes by which the MPA is managed and decisions are made. This exercise invites participants to think about appropriate governance indicators for MPA management in Bangladesh and to critically reflect about proposed indicators outlined in MPA management plans. The exercise is best combined with a lecture on good governance and indicators for assessment and evaluation in MPAs.

Example of application in "Multi-level Governance and Coordination for MPAs" – Version A

Exercise on good governance indicators for MPAs in Bangladesh MPAs (60 minutes)

- Goal: Participants discuss suitable governance indicators for MPA management in Bangladesh
- Setting: Small groups (4-10 people) on round tables, 1-2 facilitator(s) at each table
- Materials: Large sheets of paper and markers for each group table
- Supporting documents: Manual on Good Governance Indicators for MPAs with High Small-Scale Fisher Populations in South Asia (M. Glaser), Overview of Incentive Types (based on Jones et al., 2024)
- Steps for small group exercise (30 minutes)

1. Using the indicator manual and incentive overview as guidance, participants think about suitable (good) governance indicators for MPAs in Bangladesh, noting their ideas on the large sheet of paper
 2. Participants discuss which entity should monitor these indicators and at what intervals, adding their ideas on paper
 3. Participants discuss how the monitoring data should be collected, analysed, and shared
- Presentation of results and discussion in plenary (30 minutes)

Example of application in "Multi-level Governance and Coordination for MPAs" – Version B

Exercise on governance indicators in the management plans of Nijhum Dwip and SoNG MPA (90 minutes)

- Goal: Participants compare and critically assess governance indicators in the Nijhum Dwip and SoNG MPA management plans and identify potential areas of improvement
- Setting: Small groups (4-10 people) on round tables, 1-2 facilitator(s) at each table
- Materials: Large sheets of paper and markers for each group table
- Supporting documents: Summary of good governance indicators listed in the management plans of SoNG and Nijhum Dwip MPA, Manual on Good Governance Indicators for MPAs with High Small-Scale Fisher Populations in South Asia (M. Glaser), Overview of Incentive Types (based on Jones et al., 2024)
- Central question: Considering the proposed governance indicators for Nijhum Dwip MPA and SoNG MPA, what scope for improvement do you see? What should be next steps?
- Steps for small group exercise (60 minutes)
 1. Participants review and compare proposed governance indicators for Nijhum Dwip and SoNG MPA, taking into consideration criteria and incentive diversity for good governance (discussion, possibly taking notes)
 2. Participants critically assess proposed governance indicators, monitoring methods, and intervals regarding their appropriateness and clarity, noting potential improvements on the large sheet of paper
 3. Participants discuss if any governance indicators should be changed and/or added for the two MPAs, noting their ideas on the large sheet of paper
 4. Participants think about existing or needed responsibilities and capacities for monitoring and evaluation of governance indicators, noting their ideas on the large sheet of paper
 5. Participants think about possibilities for analysing and sharing data, and for translating results into adaptive management, noting their ideas on the large sheet of paper
- Presentation of results and discussion of potential next steps in plenary (30 minutes)

Exercise guidance (can be projected to the wall and/or printed out for each table)

Good Governance Indicator Exercise

Please discuss the following questions

Consider the **proposed governance indicators** for Nijhum Dwip MPA and SoNG MPA

→ What scope for improvement do you see?

→ What should be next steps?

Think about...

1. **Who should monitor** these indicators and at what intervals?
2. **What additional/other indicators** for (good) governance would be appropriate?
3. **Which capacities exist/are needed** to monitor/evaluate (good) governance?
4. **How should the data be analysed and shared?**
5. **How should results be translated into adaptive management?**

60 minutes to discuss in small groups
30 minutes to report back and discuss

Remember Good Governance Criteria for MPAs in Global South with many SSFI

- ✓ Inclusive Co-Management
- ✓ Equitable Livelihoods
- ✓ Adaptive Management
- ✓ Legal & Customary Rights
- ✓ Conflict Resolution
- ✓ Capacity Building

Remember Diverse Types of Incentives!

- ◆ Economic
- ◆ Legal
- ◆ Participation
- ◆ Communication
- ◆ Knowledge

World Café + SWOT Analysis

World Café is a methodology for fostering large group dialogue, knowledge sharing, and the collective exploration of topics in question. The core idea is to leverage the wisdom of the collective by having participants rotate between tables, carrying key insights and ideas from one conversation to the next. At each table, a different question is discussed in several rounds. Participants move between tables after each round, while the facilitator (table host) remains at their table to welcome new arrivals and briefly summarise the previous discussion. Alternatively, participants may remain at their table and facilitators move around with their question. After several rounds, the key insights, themes, and deeper questions that emerged from the various conversations are shared with the larger group.

The World Café methodology can be combined with a SWOT analysis, a strategic planning tool used to identify and evaluate the strengths, weaknesses, opportunities, and threats related to a project or topic. It provides a structured way to assess both internal (strengths and weaknesses) and external (opportunities and threats) factors that can influence success, for instance regarding the establishment, effective management, and long-term sustainability of an MPA. The SWOT analysis exercise can also be employed independently from a World Café, for instance, as a work assignment for individuals or groups.

More information:

- World Café Toolbox (by The World Café Community Foundation) at <https://theworldcafe.com/>
- Template for a virtual World Café (by Miro) <https://miro.com/miroverse/virtual-world-cafe/>
- Mastering SWOT Analysis for Environmental Policy (by Number Analytics) <https://www.numberanalytics.com/blog/mastering-swot-analysis-for-environmental-policy>
- Kaymaz Mühlhng, S. M. (2022). Understanding the strengths, weaknesses, opportunities and threats (SWOT) of marine protected area (MPA): A brief review. Green Reports, 3(8). <https://doi.org/10.36686/ariviyal.gr.2022.03.08.043>

Example of application in “Spatial Planning and MPAs” – Version A

World Café + SWOT Analysis for integrating MPAs in MSP in Bangladesh (90 minutes)

- Goal: Participants critically engage with internal and external factors that could influence the success of integrating MPAs in MSP in Bangladesh
- Setting: 4 round tables with 1 facilitator at each table, participants split into four groups
- Materials: Large sheets of paper and markers for each table, printed explanation of SWOT terms in the context of MPAs/MSP
- Central question: What could be [strengths / weaknesses / opportunities / threats] of integrating MPAs into MSP in Bangladesh? (*One table for each SWOT element*)
- Steps for SWOT-World Café (75 minutes)
 1. Each group sits down and discusses the question at their table for round 1 (15 minutes)
 2. After the end of round 1, either the group moves to the next table or the facilitator moves to the next group (facilitators keep their sheet with them)
 3. Facilitators briefly summarise what has been discussed in the last round
 4. Repeat step 1-3 for rounds 2-4, until each group has discussed all SWOT elements (60 minutes)
- Facilitators briefly present results from each table (15 minutes)
- If there is time, this could be followed by a discussion or final statements from participants

Explanation of terms for SWOT analysis:

Strengths: These are the internal positive attributes that contribute to the effectiveness and success of integrating MPAs into MSP. They are inherent characteristics or resources within or directly associated with MSP and MPAs.

Weaknesses: These are the internal negative attributes that hinder the effectiveness and success of integrating MPAs into MSP. They are limitations or deficiencies within or directly associated with MSP and MPAs.

Opportunities: These are the external factors that could be leveraged to enhance the effectiveness and success of integrating MPAs into MSP. They are favourable conditions or emerging trends in the broader marine environment and societal context.

Threats: These are the external factors that could negatively impact the effectiveness and success of integrating MPAs into MSP. They are unfavourable conditions or emerging trends in the broader marine environment and societal context.

Example of application in "Spatial Planning and MPAs" – Version B

World Café + SWOT Analysis for zoning within MPAs in Bangladesh (90 minutes)

- Goal: Participants critically engage with internal and external factors that could influence the success of zoning within MPAs in Bangladesh
- Setting: 4 round tables with 1 facilitator at each table, participants split into four groups
- Materials: Large sheets of paper and markers for each table, printed explanation of SWOT terms in the context of MPAs/MSP
- Central question: What could be [strengths / weaknesses / opportunities / threats] of zoning within MPAs in Bangladesh? (*One table for each SWOT element*)
- Steps for SWOT-World Café (75 minutes)
 1. Each group sits down and discusses the question at their table for round 1 (15 minutes)
 2. After the end of round 1, either the group moves to the next table or the facilitator moves to the next group (facilitators keep their sheet with them)
 3. Facilitators briefly summarise what has been discussed in the last round
 4. Repeat step 1-3 for rounds 2-4, until each group has discussed all SWOT elements (60 minutes)
- Facilitators briefly present results from each table (15 minutes)
- If there is time, this could be followed by a discussion or final statements from participants

Explanation of terms for SWOT analysis:

Strengths: These are the internal positive attributes that contribute to the effectiveness and success of zoning within MPAs. They are inherent characteristics or resources within or directly associated with an MPA or zoning processes.

Weaknesses: These are the internal negative attributes that hinder the effectiveness and success of zoning within MPAs. They are limitations or deficiencies within or directly associated with an MPA or zoning processes.

Opportunities: These are the external factors that could be leveraged to enhance the effectiveness and success of zoning within MPAs. They are favourable conditions or emerging trends in the broader marine environment and societal context.

Threats: These are the external factors that could negatively impact the effectiveness and success of zoning within MPAs. They are unfavourable conditions or emerging trends in the broader marine environment and societal context.

Information Management Strategy (IMS) Exercise

Effective data and information management in MPAs ensures consistent data monitoring, recognition of data ownership, and data storage and back-up. This practice ensures that stakeholders have access and awareness of data, that data quality is maintained, and that systems are interoperable for broader use, with clear roles and responsibilities defined for all involved. In this exercise, participants are invited to identify existing (and missing) stakeholders, policies, and capacities across levels for developing an MPA information management strategy (IMS) in Bangladesh. This exercise is best combined with a lecture about data and information management for MPAs.

Example of application in “Information Management and Monitoring in MPAs”

MPA Data and Information Management in Bangladesh (60 minutes)

- Goal: Participants identify existing stakeholders, policies, and capacities for MPA information management in Bangladesh, as well as those missing for developing an effective IMS
- Setting: Small groups (4-8 people) on round tables, 1-2 facilitator(s) at each table
- Materials: Large sheets of paper with prepared tables for existing and missing stakeholders, policies, and capacities, and markers for each group table
- Supporting documents: Overview of regional IMS in WIO region (Kegler et al., 2024)
- Central question: Which stakeholders, policies, and capacities (personnel, services, infrastructure) for MPA information management exist in Bangladesh? Which further policies and capacities might be needed?
- Steps for small group exercise (40 minutes)
 1. Using the example of a regional IMS in the WIO region as guidance, participants identify existing stakeholders, policies, and capacities (personnel, services, infrastructure, and security) for MPA information management in Bangladesh, filling in the first table
 2. Participants discuss which further policies and capacities might be needed to develop an effective MPA IMS in Bangladesh, adding their ideas to the second table
- Presentation of results and discussion (20 minutes)

Example of table for existing stakeholders, policies, and capacities

Level	Stakeholders	Policies / Agreements	Capacities Personnel	Capacities Services	Capacities Infrastructure	Capacities Security
Local (MPA)						
National						
Regional (Bay of Bengal)						

Example of table for missing (but needed) policies and capacities

Level	Policies / Agreements	Capacities Personnel	Capacities Services	Capacities Infrastructure	Capacities Security
Local (MPA)					
National					
Regional (Bay of Bengal)					

Capacity-Building Exercise

This brainstorming exercise invites participants to develop ideas for programmes and initiatives for building capacities for sustainable and resilient livelihoods in coastal communities that rely on and/or are affected by MPAs in Bangladesh. Such capacities are especially crucial for groups facing the greatest vulnerabilities in changing ecological and socio-political coastal conditions, such as small-scale fishers and fish workers, women, and youth. The exercise is best combined with a lecture and/or panel discussion about this topic.

Example of application in “Conflict Management and Sustainable Livelihoods in MPAs”

Building capacities for sustainable and resilient livelihoods around SoNG MPA (60 minutes)

- Goal: Participants develop programme ideas to build capacities for sustainable and resilient livelihoods in coastal communities that rely on and/or are affected by SoNG MPA, particularly for vulnerable groups (SSF, women, youth)
- Setting: Small groups (4-8 people) on round tables, 1-2 facilitator(s) at each table
- Materials: Large sheets of paper with prepared table for programme ideas, and markers for each group table
- Central question: Which programmes could help to build capacities for sustainable and resilient livelihoods in coastal communities reliant on and/or affected by SoNG MPA?
- Steps for small group exercise (40 minutes)
 1. Participants brainstorm and discuss programme ideas, thinking about the type of benefit or incentive this would create, and potential beneficiaries, implementors, and financing options
 2. After sketching out their ideas, participants note them down in the provided table
- Presentation of results and discussion (20 minutes)

Example of table for programme ideas

Programme idea	What type of benefit/incentive is this?	Who would benefit/be incentivised?	Who could implement this?	How could this be financed?

EAFM Plan Exercise

Ecosystem Approach to Fisheries Management (EAFM) is a holistic management framework that moves beyond single-species management and instead considers the entire ecosystem, including human activities, to ensure sustainable fisheries and healthy marine environments. Part of an EAFM process is the development of an EAFM plan, in which management objectives, indicators, management actions, and financing options are identified. This exercise allows participants to get a better understanding of an EAFM plan’s components and is best combined with an introduction to the concept and implementation of EAFM. While trainings dedicated to EAFM may span several days (see resources below), this exercise serves as a brief glimpse better illustrate the application of this management approach.

More information:

- Employing an ecosystem approach to fisheries management to protect our oceans (WorldFish), <https://worldfishcenter.org/blog/employing-ecosystem-approach-fisheries-management-protect-our-oceans>
- EAFM Learn (Training course materials and LEAD toolkit) available at <http://eafmlearn.org/>

Example of application in "MPAs & Resilient Fisheries

Creating an EAFM plan with sustainable coastal livelihoods for MPAs in Bangladesh (90 minutes)

- Goal: Participants gain a deeper understanding of how an EAFM approach could be applied to MPAs in Bangladesh and think about specific objectives, indicators, and actions for the different EAFM components
- Setting: Small groups (4-10 people) on round tables, 1-2 facilitator(s) at each table
- Materials: Prepared large sheets with EAFM tables and markers or providing a digital version that participants can edit on their computer (share via email or USB drive)
- Steps for working on the EAFM tables (60 minutes)
 1. Assign one group to each EAFM component (ecological well-being, human well-being, good governance)
 2. Groups identify key points (issues, goals, objectives, indicators) for their component and fill in the respective column in Table A
 3. Groups identify management actions, costs, and potential funding sources for each objective and fill in Table B of their component
- Presentation of results and discussion (30 minutes)

Example for EAFM tables (courtesy of Dr. Md. Nahiduzzaman, WorldFish):

Table A

Key Points	Ecological Well-being	Human Well-being	Good Governance
Issues			
Goals			
Objectives			
Indicators			

Table B

Ecological Well-being / Human Well-being / Good Governance			
Objectives	Management Action	Cost (million BDT)	Financial Source

APPENDIX

Overview of Appendices

Appendix A: Reflections and recommendations

Appendix B: Example of module evaluation forms

Appendix A: Reflections and recommendations

Module 1 (Basics of Responsible and Evidence-informed MPA Management)

Overall, the first two training days had a collaborative atmosphere and resulted in many engaging discussions. Many participants (especially those from BDF and DoF) had attended similar workshops and trainings before. The main added benefit of our training was bringing together government stakeholders that do not regularly interact and facilitate exchange and mutual learning among them, which was the intention of our training design. However, we only had limited success in recruiting government officials that play a “peripheral”, yet important, role in the implementation of MPA management plans, i.e., from ministries and departments related to national coordination, planning, tourism, or social services and welfare. Moreover, most participants were based in Dhaka, while only few officials from regional offices (that are more closely involved in on-site MPA management) attended. Participants further wished for the inclusion of fishing community representatives in future trainings.

On average, participants rated all the contents, exercises, and materials of this module rather high or very high in terms of clarity, relevance, usefulness, depth, and delivery. The inputs of invited experts provided were of great quality and thus highly appreciated. Participants valued the combination of lecture inputs, discussions, and interactive exercises. They particularly appreciated case study examples (national and international) to illustrate contents. Several participants expressed the desire to learn more about the current status of and activities in specific MPAs in Bangladesh. Most participants did not (yet) have access to MPA management plans, even if their ministry/department is involved in drafting these documents. In addition to the topics covered in the training, participants wished to receive training in practical skills and capacity-building activities for monitoring (ideally during a field trip), and to learn more about the activities of the Joint Monitoring Centre, monitoring systems such as SMART, and citizen science networks.

Time management was an issue for some presentations and exercises, even with some planned buffer time. This was especially apparent on the second day, and planned inputs on SSF in Bangladesh and the FAO Voluntary Guidelines for Securing SSF as well as a World Café exercise with SWOT analysis for the implementation of MPAs in Bangladesh could not be conducted. A presentation on equity and justice for SSF and a SWOT analysis exercise were included in Module 2 instead.

The NetMap exercise on the first day was well-received and yielded interesting results. During the exercise, we observed some unconstructive discussions against proposed stakeholder groupings that took up valuable time. We further noticed some uncertainty about assigning levels of influence to certain actors or groups (mandate vs. implementation, now vs. future potential, social influence vs. legal power), as well as about desired (further) links. Some participants seemed to think that adding more links between stakeholders would reduce the efficiency of MPA management. We had deliberately combined presentations on co-management and on national coordination for MPAs with the second part of the NetMap exercise, in order to convey equal importance to both bottom-up and top-down approaches to MPA governance. However, in practice this resulted in a (potentially pre-existing) bias favouring top-down approaches in the exercise and following discussions. We further noted that, despite our instructions, discussions during the second part of the exercise and resulting NetMaps did not necessarily relate to the proposed management plan of the MPA in question.

During the EAFM Plan exercise we observed that participants had a good sense of differentiating between goals, objectives, and indicators. While participants had no issues to define objectives and management actions for ecological and human well-being, we noticed that the concept of “good governance” seemed to be unclear to many, although it was covered in the EAFM lecture input. We thus decided to dedicate further training to good governance and related indicators in Module 4.

Recommendations:

For future trainings, we recommend to actively recruit a diverse set of participants, including ministries and departments beyond the lead agencies for developing and implementing MPA management plans, for this baseline module. The representation of regional officers in the baseline training should be strengthened. This could be achieved by conducting this module regionally with involvement officers from Dhaka, or at national level in Dhaka with regional officers reporting from their district, to make the most of their diverse perspectives. In the training, small group exercises should be mixed rather than grouping participants from the same agency. Requests for nominations should be specific about expectations toward participants (i.e., officials from regional departments who engage with MPA-related tasks or with MPA-affected communities), to ensure a targeted training and a common level of previous knowledge. This is especially important as nominations might be communicated only shortly before the trainings and it is likely that an assessment of previous experiences and training needs of participants is not possible prior to the training. Detailed explanations for nomination requests (e.g., brief concept notes) and strategic partnerships with intermediaries from NGOs or academia might be helpful to reach important “peripheral” officials.

Regarding contents, we recommend to include fewer topics and speakers per day and extend Module 1 to three or four days, to leave more room for exercises and discussions and thus allow for a deeper engagement with the contents. Invited experts should be carefully briefed about the daily agenda to make them aware of time limitations and of how exercises are related to their lecture input. When guest speakers propose exercises, the procedure and required materials should be thoroughly communicated beforehand to avoid delays during the training. Ideally, the organising team itself facilitates the exercise and prepares the technical set-up. The topics of co-management and national level coordination for MPAs should not be addressed at the same time. Instead, there should be a dedicated slot in Module 1 (lecture, discussion, and exercise) solely for co-management. We further recommend to develop a specialised module for the topic of multi-level governance and coordination across levels of governance. Additional specialised modules could also be developed for MPA monitoring in practice in the Bangladesh (actors, systems, tools).

For the NetMap exercise, the difference of using this method as a research tool (aiming to understand participants’ view of a system) and a didactic tool (aiming to create a common understanding among participants) should be noted. To avoid prolonged discussions about stakeholder groupings, an initial stakeholder map could be provided as a starting point. Facilitators should moderate the second part of the exercise (expected roles and desired links) in a way that encourages participants to critically engage with the management plan (or action plan) of the MPA in question, to enable considerations of (potentially) required adaptations for the achievement of desired outcomes.

Module 2 (Spatial Planning and MPAs)

The International Conference on Marine Spatial Planning (MSP) for Advancing Sustainable Blue Growth presented a unique opportunity to integrate an international conference with a broad range of expertise into our training. Due to the conference taking place in a different part of Bangladesh, only a limited number of pilot training participants were able to join. On average, participants rated all the contents, exercises, and materials of this module rather high or very high in terms of clarity, relevance, usefulness, depth, and delivery. Participants worked diligently on their SWOT exercise and integrated topics addressed in presentations and discussions of our session and of the general conference. However, we noticed that the learning outcomes from doing this exercise independently were limited and that participants would have benefitted from closer guidance. The first part of Module 3 was used to give all participants an overview of central insights from the conference and our session there. Moreover, a structured summary of the exercise results was presented and provided as a handout.

The conference was attended by a group of local fishermen who also joined our panel, which greatly enriched our discussions and was appreciated by training participants. While we were pleased about this development, attendance of these fishermen came as a surprise which only allowed for a few spontaneous adaptations to our session (e.g., translations, discussions), rather than designing the whole session in more inclusive manner.

Recommendations:

For future trainings, we recommend to conduct this module in the same structure as other specialisation modules, with short thematic inputs, discussions, and an exercise. The SWOT analysis requires facilitation and should be implemented as a group exercise, for instance in combination with a World Café.

Online Sessions (Modules 3-6)

Four specialised modules were conducted in an online format. After encountering some technical issues with using Microsoft Teams for the first online session, the remaining three sessions were hosted using Zoom. This change also enabled the use of additional features, such as session recordings and breakout rooms for small group exercises. Online attendance ranged between seven and fourteen participants per session. Despite great efforts to make the online sessions attractive and schedule them according to participants' preferences and availability, establishing commitment was difficult and there were several conflicting work appointments (even on weekends), especially for Modules 4 and 5. Whereas most participants actively took part in group work and discussions during the in-person training sessions, it was very challenging to generate engagement online. Although online training contents were generally still rated high in terms of clarity, relevance, and usefulness, the effectiveness of exercises was considered lower compared the ones conducted in person.

The group exercises that were initially planned for Module 3 (Managing Synergies and Trade-offs in Marine Spaces) and for Module 5 (Capacities and Livelihoods for Sustainable MPAs) could not be conducted, as lecture inputs and other discussions took longer than planned and we decided against extending the length of the session. For the Information Management Strategy exercise in Module 4 (Data and Information for Sustainable MPAs), we realised that the exercise seemed overly confusing for participants and required further refinement. Instead of exercises, Module 6 (Way forward for Sustainable MPAs in Bangladesh) used group discussions as interactive elements, an approach that proved fruitful.

As in the previous two modules, contributions of invited experts were of high quality and resulted in thought-provoking conversations. The panel discussion format used in Module 5 was well-received and the combination of researchers bringing both local and international experiences from working with citizen science and alternative livelihood projects turned out to be effective. Unfortunately, the invited NGO representative was unable to attend the session.

Recommendations:

For future trainings, we recommend that specialisation modules are conducted with regional officers in districts close to the MPAs themselves, and that participants choose (or are nominated for) specialisation modules selectively, depending on interest and applicability to their work.

We further recommend to either fully conduct specialised modules in presence or to limit the online sessions to lecture inputs and discussions while implementing practical exercises in presence. While online sessions are a great low-cost option to bring together both local and international experts with participants from various locations, this advantage mostly pays off for seminar formats with lecture inputs, expert panels, and Q&A elements. 45-60 minutes should be planned for each presentation/panel, to leave enough time for questions and discussion.

Appendix B: Example of module evaluation forms

Feedback Form Day 1 (Dhaka, 09.04.2025) – Similar for Module 1 (Day 2) and Modules 2-6

1.1 MPAs in Context

- Lecture about MPAs in Bangladesh in context of conservation, sustainable fisheries, and Blue Economy
- NetMap exercise part 1: Stakeholder identification in Bangladesh MPA management

Please rate this training component:

Evaluation of contents	1 (very low)	2 (rather low)	3 (rather high)	4 (very high)
Clarity				
Relevance to your work				
Usefulness to your work				
Appropriateness of information depth/detail				
Effectiveness of delivery				
Effectiveness of exercises				
Helpfulness of materials (slides, handouts, etc.)				

- What specific aspects of this module component did you find most useful?
- What were your key takeaways or most important points from this module component?
- What questions or concerns do you still have about the content of this module component?

1.2 Coordination and Cooperation for MPAs

- Lecture about opportunities and challenges for co-management in Bangladesh
- Presentation about national coordination for MPAs (Public One workshop)
- NetMap exercise part 2: Expected roles and desired links for managing the SoNG MPA

Please rate this training component:

Evaluation of contents	1 (very low)	2 (rather low)	3 (rather high)	4 (very high)
Clarity				
Relevance to your work				
Usefulness to your work				
Appropriateness of information depth/detail				
Effectiveness of delivery				
Effectiveness of exercises				
Helpfulness of materials (slides, handouts, etc.)				

- What specific aspects of this module component did you find most useful?
- What were your key takeaways or most important points from this module component?
- What questions or concerns do you still have about the content of this module component?
- Do you have any suggestions or recommendations to improve this module?