Summary: Framework and Guidance for MPA Network Design and Management

How to evaluate whether a network of Marine Protected Areas (MPAs) is ecologically representative, well-connected, and functional? How to set meaningful objectives for such an MPA network, and what to do in order to meet these objectives?

The Framework for the Design and Management of MPA Networks was developed to help answer these questions. The Framework provides a common language and an agreed-upon set of components that are crucial for ensuring communication and compilation of comparable data between and across areas and administrative levels. With the help of a structure for clear goals and objectives, the Framework also makes it possible to evaluate the MPA Networks.

KEY DEFINITIONS

Ecological representativity – A representative MPA Network encompasses geographically well-distributed, relevant proportions of the full range of ecosystems and ecosystem components that occur in a marine region.

Functionality – A functional MPA Network maintains and improves the status of ecosystems, habitats, and species that it aims to protect.

Effective management – An MPA Network is effectively managed if its ecological (Nested) Targets are sufficiently protected, the negative effects of human activities are reduced, and favourable Conservation Status is achieved.

The Framework relies on a basic Theory of Change (see figure below), which provides a structure for the main components needed for MPA Network design and management. Along with the step-by-step guidance (see next page), it helps to systematically reason through what to protect (Targets) and how much to protect (Protection Objectives) in order to achieve the desired status (Goals). It provides tools for identifying the sensitivity of these Targets to Threats, and for using that insight to set Threat Reduction Objectives and determining the required stringency of regulation (Regulation Objectives).

Basic Theory of Change for MPA Network

Sufficient protection

If sufficient and effective protection is ensured across the MPA network...

... there will be a reduction in harmful human activities, and...

... the goals of maintaining or restoring the status of key marine values will be reached.

Status of key marine habitats and species restored / maintained

Scope & Vision (Step 2)

Taxonomy of Threats (Step 6)

Taxonomy of (Nested) Targets (Step 3)

Goals for Nested Targets (Step 4)

Summary of main components in MPA network design

Protection Objectives (Step 5)

Threat Reduction Objectives (Step 7)

Analysis of how much of each Nested Target needs to be protected (Protection Objectives)

Analysis of which Threats can be regulated with MPA Legislation

Analysis of recommended regulation given sensitivity (Regulation Objectives)

Analysis of the sensitivity of Nested Targets to Threats (Step 6.2)

Analysis of how much of each Nested Target needs to be protected (Protection Objectives)

Analysis of which Threats can be regulated with MPA Legislation

Analysis of recommended regulation given sensitivity (Regulation Objectives)

Analysis of the sensitivity of Nested Targets to Threats (Step 6.2)
Along with the Framework, step-by-step guidance is provided for applying the principles to design and manage networks of marine protected areas (see figure right). Though developed for Sweden to meet its commitments for protecting its marine waters, the Framework and the step-by-step guidance can be used for the design and management of a single MPA or a set of MPAs, a regional or national MPA Network, and potentially even an international MPA network.

A solid evidence base is key for the successful implementation of the Framework, and the generation and use of evidence is an integral part of the adaptive management process. To address the need for evidence, the document contains recommendations for compiling an evidence base and visualising it in the form of a dashboard. The dashboard enables data analysis and displays key information for decision-making on management and development of the MPA network.

The work to date only represents a first attempt to construct a Framework with the definitions, components, guiding principles, and methodology needed to guide MPA network design and management. Some elements require further development and integration in order to better answer to the challenges of marine protection. The Framework will be refined over time, as it is put into practice and as learning is generated about what works and what does not.

Find out more and download the full report including Framework and guidance on the Swedish Agency for Marine and Water Management web page.

The Framework was developed by the Swedish Agency for Marine and Water Management and coastal County Administrative Boards, in a process led by FOS Europe and in collaboration with experts in marine conservation.