

Taking Steps toward Marine and Coastal Ecosystem-Based Management

AN INTRODUCTORY GUIDE



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List of Acronyms

CBD: Convention on Biological Diversity CBD COP IX and X: Ninth and Tenth Conferences of the Parties to the Convention on Biological Diversity CCAMLR: Commission for the Conservation of Antarctic Marine Living Resources DPSIR: Drivers-Pressures-State-Impacts-Responses framework EA: Ecosystem Approach EAF: Ecosystem Approach to Fisheries EBA: Ecosystem-Based Adaptation EBFM: Ecosystem-Based Fisheries Management EBM: Ecosystem-Based Management EIA: Environmental Impact Assessment EU: European Union FAO: Food and Agriculture Organization of the United Nations GEF: Global Environment Facility GEO: Global Environmental Outlook GIS: Geographic Information System HELCOM: Helsinki Commission (Baltic Marine Environment Protection Commission) ICES: International Council for the Exploration of the Sea ICZM: Integrated Coastal Zone Management IEA: Integrated Ecosystem Assessment IMO: International Maritime Organization IUCN: International Union for Conservation of Nature IWCAM: Integrating Watershed and Coastal Areas Management project LME: Large Marine Ecosystem MPA: Marine Protected Area MSP: Marine Spatial Planning NGO: Non-Governmental Organization OSPAR: Convention for the Protection of the Marine Environment of the North-East Atlantic (originally the Oslo and Paris Conventions) PES: Payments for Ecosystem Services SEA: Strategic Environmental Assessment TDA: Transboundary Diagnostic Analysis UN: United Nations **UNEP: United Nations Environment Programme** UNESCO: United Nations Educational, Scientific and Cultural Organization UNGA: United Nations General Assembly

Foreword: Why Ecosystem-Based Management of Oceans and Coasts?

Healthy marine and coastal ecosystems provide many valuable services - from food security, resources for economic growth and recreation alongside tourism and coastline protection. They are also recognized as crucial reservoirs of biodiversity at a time when the loss of species on both land and in the sea is an increasing cause for concern.

Among the most productive ecosystems on the planet, oceans and coasts ensure the well-being for a growing global population, which is likely to rise to over nine billion by 2050. They regulate global climate and offer essential adaptation capacity. The future role of ecosystems for human well-being depends increasingly on developing the capacity of countries to manage human uses and impacts in order to ensure their health and self-repairing capacity is not undermined.

Central to a transformational response to decades of overfishing, pollution and unplanned urban development will be moving from sectoral marine and coastal management, to a joined approach that marries the seemingly competing interests



for ocean and coastal resources and space, such as environment, tourism, fisheries and energy generation, within a robust framework and a spatial planning perspective. This is central to ensuring equitable access among diverse interests and users.

The Ecosystem Approach lays out a series of principles to guide management towards long-term sustainability of marine and coastal ecosystems. With this Guide, UNEP seeks to assist countries and communities to take steps towards making marine and coastal ecosystem-based management operational - from strategic planning to on-site implementation. An important aim of this Guide is to facilitate the implementation of UNEP's overarching Ecosystem Management Programme and new Marine and Coastal Strategy in countries and regions - in line with its Medium Term Strategy 2010-13.

The Marine and Coastal Ecosystem-Based Management (EBM) Guide outlines operational considerations in an accessible language, drawing upon practical experiences and lessons across the globe – from tropical coastlines to temperate estuaries and polar ocean ecosystems. An



important message is that this is an incremental process and there are different paths toward EBM. Cross boundary considerations and working with neighbours and even countries far away will be an essential component.

The UNEP Regional Seas Programme is uniquely placed to assist while also acting as a forum for practical engagement with other regional and international organisations, such as regional fishery management organisations, initiatives of the International Maritime Organisation, and other relevant bodies.

The target audience of the Guide includes planners and decision-makers in local, national and regional governments and communities across a broad spectrum of interests and uses. The Guide is not a technical manual or textbook; rather it is an introduction to EBM principles and applications, providing an overview of core elements and pathways to getting started.

This Guide is intended to complement UNEP's work, such as the Green Economy providing guidance on making changes in the way we interact with ecosystems, as well as the Blue Carbon Initiative, which explores the potential for mitigating climate change by investing and re-investing in healthy coastal ecosystems that capture and store carbon.

Moreover, EBM offers a valuable solution for harnessing marine and coastal ecosystems in adapting to climate change and other potential disasters.

I am sure this Guide will prove a valuable resource in assisting coastal countries and communities to move from theory to practical ecosystem-based management of our oceans and coasts.

Jelin Steins

Achim Steiner UN Under-Secretary General and Executive Director UNEP

Imagine this scenario...

very productive and valuable ocean area lies at risk. Previously the area provided people with everything they needed: food, energy, recreation, and more. But now there are problems. Runoff from farms and towns upstream has started to pollute the water. Coastal wetlands where fish produced their young are being filled to build condominiums. Offshore energy platforms for oil and wind are being built near coral reefs and in key habitats for whales, turtles, and seabirds.

The people gather to decide what to do. Farmers, builders, fishermen, conservationists, politicians, energy industry people — everyone is there. They use science to understand how the various parts of the ocean ecosystem connect to each other, and how the ecosystem connects to people. They look at the ways they are impacting the environment and decide which impacts most need to be addressed by management. Together they plan how uses of the ecosystem can be managed better and special areas can be protected.

Then they put those changes into effect. Practices at upstream farms and in towns are improved to reduce runoff. Wetlands are protected from development. Fishing areas and seasons are managed to allow stocks and habitats to recover. And offshore energy projects are placed to have less of an impact on sensitive marine habitats.

The people enjoy the benefits of these changes, including a healthier and more resilient ecosystem, larger catches of fish, and fewer conflicts between groups of users. By basing the plan on solid knowledge of how the ecosystem and people

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