# UNITED NATIONS



**UNEP**/EC/Ocean Governance/WG.3/3

Distr.: General

3 February 2017

Original: English



United Nations Environment Programme





UNEP/EC Workshop on Are-based Management and Regional Cooperation for the Implementation of Ocean-related Sustainable Development Goals

Brussels, 9-10 February 2017

Preliminary analysis of area-based Management measures to support SDG implementation

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## INTEGRATED MANAGEMENT AND GOVERNANCE STRATEGIES FOR DELIVERY OF OCEAN-RELATED SDGS

#### **UNEP-EC GPGC project**

#### 1. INTRODUCTION

#### 2. DEFININING AREA-BASED PLANNING TOOLS

#### 2.1 Objective

The objective of A1 is to provide an overview of terms and definitions used regarding 'area-based management tools' including a description of the core elements of different area-based management tools, highlighting commonalities and differences. This will assist clarifying how concepts such as 'spatial planning', 'integrated area-based management' and a range of sector-led ABMTs are used and which specific policies or institutions are covered by them relevant to SDG implementation. Key questions to be addressed include:

- How are different area-based tools defined? What are their key elements?
- Are there core common features of, or synergies between, ABMTs that may be identified in order to address specific regional or national contexts?
- What ABMTs are available to support policy implementation to achieve ocean-related SDGs?

#### 2.2 Methods

A two stage approach will be undertaken:

- i. A focused literature review of area-based management terms/definitions used in ocean and coastal policies, strategies or management plans.
- ii. An analysis of practical case study examples of ABMTs used to implement ocean and coastal policies, protocols, action plans, as well as planning and management processes. The review will examine the overall characteristics and utility of different types of ABMTs, both multi-sector approaches (e.g. ICZM, MPAs, MSP, Ridge-to-Reef, others) and sector-specific approaches (e.g. Particularly Sensitive Seas Areas, fishing closures, others). A1 will analyze common elements and provide a typology of key features of different approaches. It will further highlight (a) the primary benefits and (b) the wider benefits of each approach.

### 2.3 Definitions of ABMT

A focused literature review of area-based management terms/definitions used in ocean and coastal policies, strategies or management plans was undertaken. The results are presented in Tables 2.1-2.5, which provide an overview of terms and definitions used regarding area-based management tools (ABMT). The tables include a description of the core elements of a range of area-based management tools, highlighting commonalities and differences.

Table 2.1: Definitions and core elements of Marine Spatial Planning<sup>1</sup>

| Definition                         | Core components        | Source              |
|------------------------------------|------------------------|---------------------|
| [Marine Spatial Planning] is about | Stakeholder engagement | European Commission |

<sup>&</sup>lt;sup>1</sup> Marine Spatial Planning / Maritime Spatial Planning / Marine Planning / Marine and Coastal Marine Spatial Planning

| Definition  | Core components  | Source   |
|---|--|--|
| planning when and where human activities take place at sea – to ensure these are as efficient and sustainable as possible.              | <ul> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Transboundary cooperation</li> </ul>  | Directorate-General For Maritime Affairs And Fisheries. (2017). Maritime spatial planning. Retrieved from https://ec.europa.eu/maritimeaffairs/policy/maritimespatial_planning_en  |
| A cross-cutting policy tool enabling public authorities and stakeholders to apply a coordinated, integrated and transboundary approach. | <ul> <li>Ecosystem approach</li> <li>Stakeholder engagement</li> <li>Based on best available data and information</li> <li>Transboundary cooperation</li> <li>Cooperation with third countries</li> <li>Information sharing</li> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Cross-sectoral</li> </ul> | European Union. (2014). Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning. Offical Journal of the European Union, 2014(April), 135– 145. Retrieved from <a assets.wwf.org.uk="" downloads="" href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=celex.europa.eu/legal-content/EN/TXT/PDF&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;A science-based tool that regions can use to address specific ocean management challenges and advance their goals for economic development and conservation. () This process is designed to decrease user conflict, improve planning and regulatory efficiencies, decrease associated costs and delays, engage affected communities and stakeholders, and preserve critical ecosystem functions and services.&lt;/td&gt;&lt;td&gt;&lt;ul&gt; &lt;li&gt;Information sharing&lt;/li&gt; &lt;li&gt;Stakeholder engagement&lt;/li&gt; &lt;li&gt;Ecosystem approach&lt;/li&gt; &lt;li&gt;Holistic approach (i.e. takes into account economic, social and environmental aspects)&lt;/li&gt; &lt;li&gt;Ecosystem Services&lt;/li&gt; &lt;/ul&gt;&lt;/td&gt;&lt;td&gt;National Oceanic and&lt;br&gt;Atmospheric&lt;br&gt;Administration (NOAA).&lt;br&gt;(n.d.). Coastal and Marine&lt;br&gt;Spatial Planning.&lt;br&gt;Retrieved from&lt;br&gt;https://cmsp.noaa.gov/&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;A strategic plan for regulating, managing and protecting the marine environment that addresses the multiple, cumulative and potentially conflicting uses of the sea.&lt;/td&gt;&lt;td&gt;• N/a&lt;/td&gt;&lt;td&gt;Department for&lt;br&gt;Environment, Food and&lt;br&gt;Rural Affairs (Defra)&lt;br&gt;(2003) Planning in the&lt;br&gt;Coastal and Marine&lt;br&gt;Environment: Next Steps&lt;br&gt;to Action. CoastNet&lt;br&gt;conference, 1st October&lt;br&gt;2003.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;A plan-led framework that enables integrated, forward-looking, consistent decision-making in relation to policies and practices across regional space.  Marine spatial planning (MSP) is a public process of analyzing and allocating the spatial and temporal&lt;/td&gt;&lt;td&gt;&lt;ul&gt; &lt;li&gt;Information sharing&lt;/li&gt; &lt;li&gt;Ecosystem approach&lt;/li&gt; &lt;li&gt;Holistic approach (i.e. takes into account economic, social and environmental aspects)&lt;/li&gt; &lt;li&gt;Ecosystem Services&lt;/li&gt; &lt;li&gt;Strategic Environmental Assessment (SEA)&lt;/li&gt; &lt;li&gt;Cumulative Impact Assessment&lt;/li&gt; &lt;li&gt;Spatial analysis / Modelling&lt;/li&gt; &lt;li&gt;Stakeholder Engagement&lt;/li&gt; &lt;li&gt;Performance monitoring&lt;/li&gt; &lt;li&gt;Ecosystem approach&lt;/li&gt; &lt;li&gt;Holistic approach (i.e. takes into account economic, social and environmental&lt;/li&gt; &lt;/ul&gt;&lt;/td&gt;&lt;td&gt;World Wildlife Fund (WWF) UK. (2005). Marine Spatial Planning. Retrieved from &lt;a href=" http:="" mamspwa.pdf"="">http://assets.wwf.org.uk/downloads/mamspwa.pdf</a> Ehler, C., & Douvere, F. (2009). Marine Spatial Planning: a step-by-step |

| Definition   | Core components  | Source  |
|--|--|---|
| distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process.  | aspects)  Cross-sectoral  Adaptive management  Stakeholder engagement  | approach toward ecosystem-based management. http://doi.org/Intergovern mental Oceanographic Commission and Man and the Biosphere Programme. Retrieved from http://unesdoc.unesco.org/images/0018/001865/18655 9e.pdf  |
| Marine spatial planning (MSP) is a practical way to create and establish a more rational organization of the use of marine space and the interactions between its uses, to balance demands for development with the need to protect marine ecosystems, and to achieve social and economic objectives in an open and planned way. | Holistic approach (i.e. takes into account economic, social and environmental aspects)     Cross-sectoral  | Department of Environment, Food and Rural Affairs (DEFRA) (2009). Managing Our Marine Resources: the Marine Management Organization. Defra: London, UK. 38 p.   |
| Marine spatial planning (MSP) is a framework which provides a means for improving decision-making as it relates to the use of marine resources and space.  | <ul> <li>Ecosystem approach</li> <li>Spatial analysis / Modelling</li> <li>Adaptive management</li> <li>Ecosystem Services</li> <li>Scenario / trade-off analysis</li> <li>Stakeholder engagement</li> <li>Based on best available data and information</li> </ul> | Global Environment Facility (GEF). (2012). Marine Spatial Planning in the Context of the Convention on Biological Diversity. GEF/STAP/C.43/Inf.05. Retrieved from http://www.unep.org/dgef/ Portals/43/news/GEFSTA P C43Inf 05 MarineSPC ontextConvention_on_Biol ogicalDiversity.pdf |

**Table 2.2. Definitions are core elements of Integrated Coastal Management** 

| Definition   | Core components  | Source  |
|--|--|---|
| Integrated coastal management aims for the coordinated application of the different policies affecting the coastal zone and related to activities such as nature protection, aquaculture, fisheries, agriculture, industry, off shore wind energy, shipping, tourism, development of infrastructure and mitigation and adaptation to climate change. | <ul> <li>Cross-sectoral</li> <li>Ecosystem approach</li> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Stakeholder engagement</li> <li>Based on best available data and information</li> </ul> | European Commission Directorate-General for Environment. (2016). Integrated Coastal Management. Retrieved from http://ec.europa.eu/environ ment/iczm/index_en.htm |
| The overall objective of an integrated management programme, like ICZM, is to provide for the best long-term and sustainable use of coastal natural resources and for perpetual maintenance of the most natural environment.   | <ul> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Naturalness</li> <li>Ecosystem approach</li> <li>Long-term</li> </ul>   | FAO (Food and<br>Agriculture Organisation).<br>Clark, J. R. (Ed.).<br>(1995). Coastal zone<br>Management handbook.<br>CRC Press.                                  |
| [ICZM] is the most appropriate process to address current and long-term  | <ul><li>Adaptive management</li><li>Holistic approach (i.e. takes into account</li></ul>   | Intergovernmental Panel on Climate Change   |

| Definition   | Core components  | Source   |
|--|--|--|
| coastal management issues, including habitat loss, degradation of water quality, changes in hydrological cycles, depletion of coastal resources, and adaptation to sea level rise and other impacts of global climate change. () However, it should be noted that () there is no unique "recipe" for the process of ICZM; rather, it should be regarded as a range of concepts and techniques that can be adapted to different situations and circumstances. | economic, social and environmental aspects)  • Scenario / trade-off analysis  • Stakeholder engagement  • Spatial analysis / modelling  • Based on best available data and information  • Performance monitoring  • Ecosystem approach   | (IPCC). (1994). World Coast Conference 1993 Conference Report. Retrieved from http://www.coastalcoopera tion.net/documents/WCC9 3PreparingtomeettheCoast alChalangesofthe21stCent urywcc93conference.pdf  Vallega, A. (2002).  |
| Integrated Coastal Zone Management (ICZM), is a planning and coordinating process which deals with development management and coastal resources and which is focused on the land/water interface.  Coastal zone management involves  | <ul> <li>Based on best available data and information</li> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Cross-sectoral</li> <li>Stakeholder engagement</li> <li>Naturalness</li> </ul>  | Coastal Management: the Integration Principle Clark, J. R. (2002). Integrated management of coastal zones. FAO Fisheries Technical Paper. No. 327. Rome, FAO. 167p.  National Oceanic and  |
| managing coastal areas to balance environmental, economic, human health, and human activities.  A dynamic, multidisciplinary and   | Holistic approach (i.e. takes into account economic, social and environmental aspects)   | Atmospheric Administration (NOAA). (n.d.). What is coastal zone management? Retrieved from <a href="http://oceanservice.noaa.gov/facts/czm.html">http://oceanservice.noaa.gov/facts/czm.html</a>   |
| iterative process to promote sustainable management of coastal zones. It covers the full cycle of information collection, planning (in its broadest sense), decision making, management and monitoring of implementation.  | <ul> <li>Based on best available data and information</li> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Stakeholder engagement</li> <li>Adaptive management</li> <li>Cross-sectoral</li> <li>Performance monitoring</li> </ul>  | European Union. (2000). Integrated Coastal Zone Management: A strategy for Europe. Official Journal of the European Union, 27. Retrieved from <a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2000:0547:FIN:EN:PDF">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2000:0547:FIN:EN:PDF</a>                    |
| CZM is a process of governance and consists of the legal and institutional framework necessary to ensure that development and management plans for coastal zones are integrated with environmental (including social) goals and are made with the participation of those affected  | <ul> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Stakeholder engagement</li> <li>Cross-sectoral</li> <li>Adaptive management</li> <li>Scenario / trade-off analysis</li> <li>Precautionary principle</li> <li>Polluter pays principle</li> <li>Resource accounting</li> <li>Transboundary cooperation</li> <li>Intergenerational equity</li> </ul> | The World Bank. Post, J. C., & Lundin, C. G. (Eds). (1996). Guidelines for integrated coastal zone management. Environmentally Sustainable Development Studies and Monographs Series. Retrieved from <a href="http://elibrary.worldbank.org/doi/book/10.1596/0-8213-3735-1">http://elibrary.worldbank.org/doi/book/10.1596/0-8213-3735-1</a> |
| [ICZM is] a dynamic process for the sustainable management and use of coastal zones, taking into account at the same time the fragility of coastal ecosystems and landscapes, the  | Holistic approach (i.e. takes into account economic, social and environmental aspects)     Stakeholder engagement     Cross-sectoral   | UNEP/MAP/PAP (2008). Protocol on Integrated Coastal Zone Management in the Mediterranean. Split, Priority Actions  |

| Definition                                | Core components                  | Source   |
|---|----------------------------------|--|
| diversity of activities and uses, their   | Adaptive management              | Programme. Retrieved                               |
| interactions, the maritime orientation of | Ecosystem approach               | from <a href="http://www.pap-">http://www.pap-</a> |
| certain activities and uses and their     | Information sharing              | thecoastcentre.org/pdfs/Pro                        |
| impact on both the marine and land        | Based on best available data and | tocol publikacija May09.                           |
| parts.                                    | information                      | <u>pdf</u>   |
|   | Cross-sectoral                   |  |
|   | Transboundary cooperation        |  |

Table 2.3 Definitions are core elements of Marine Protected Area Management

| Definition  | Core components  | Source  |
|---|--|---|
| A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. () This implies that MPAs must be mapped and have boundaries that are legally defined.() In MPAs, management may need to address the airspace above the sea surface, the actual water surface, the water column (or parts of it), the seabed and the sub-seabed, or just one or a combination of two or more of these elements | <ul> <li>Transboundary cooperation</li> <li>Based on best available data and information</li> <li>Spatial analysis / modelling</li> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Long-term</li> <li>Protect key biodiversity features</li> <li>Ecosystem services</li> </ul>  | Day J., Dudley N., Hockings M., Holmes G., Laffoley D., Stolton S. & S. Wells, 2012. Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas. Gland, Switzerland: IUCN. 36pp.   |
| An area designated and effectively managed to protect marine ecosystems, processes, habitats, and species, which can contribute to the restoration and replenishment of resources for social, economic, and cultural enrichment.  | <ul> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Ecosystem approach</li> <li>Building ecosystem resilience</li> <li>Protect vulnerable / critical habitats and/or species</li> <li>Protect key biodiversity features</li> <li>Replenish fish stocks</li> <li>Stakeholder engagement</li> <li>Part of an integrated management plan</li> <li>Enforcement</li> <li>Financial sustainability</li> </ul> | World Wildlife Fund (WWF). (2017). Marine Protected Areas. Retrieved from http://wwf.panda.org/wh at we do/how we work /our_global_goals/oceans /solutions/protection/prot ected_areas/   |
| An MPA network is essential () to integrated marine nature conservation and other marine activities in pursuing its vision for clean healthy, safe, productive and biologically diverse oceans and seas.  | <ul> <li>Risk assessment</li> <li>Stakeholder engagement</li> <li>Protect vulnerable / critical habitats and/or species</li> <li>Cumulative impact assessment</li> <li>Cross-sectoral</li> <li>Performance monitoring</li> <li>Enforcement</li> <li>Spatial analysis/ modelling</li> </ul>   | Liley, D., Morris, R. K. A., Cruickshanks, K., Macleod, C., Underhill- Day, J., Brereton, T., & Mitchell, J. (2012). Identifying best practice in management of activities on Marine Protected Areas. Natural England Commissioned Reports (Vol. 108). Retrieved from <a href="http://publications.naturalengland.org.uk/publication/3800278">http://publications.naturalengland.org.uk/publication/3800278</a> |

| Definition   | Core components  | Source  |
|--|--|---|
| Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.   | <ul> <li>Enforcement</li> <li>Stakeholder engagement</li> <li>Protect key biodiversity features</li> <li>Transboundary cooperation</li> <li>Establishment in ABNJ</li> <li>Cross-sectoral</li> <li>Zoning</li> <li>Adaptive management</li> <li>Financial sustainability</li> <li>Performance monitoring</li> <li>Replenish fish stocks</li> </ul>   | Kelleher, G. (1999). Guidelines for Marine Protected Areas. IUCN, Gland, Switzerland and Cambridge, UK. xxiv +107pp. Retrieved from http://www.birdlist.org/d ownloads/iucn/pag-003- guidelines-marine- pas.pdf   |
| Same as Day et al. 2012: A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.  | <ul> <li>Top-down and bottom-up management</li> <li>Market incentives</li> <li>Collaborative management</li> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Protect key biodiversity features</li> </ul>  | Jones, P. J. S., Qiu, W., & De Santo, E. (2011). Governing Marine Protected Areas: Getting the Balance Right. United Nations Environment Programme Technical Report. Retrieved from http://www.mpag.info/go verning-mpas-final-technical-report-web-res.pdf |
| Marine Protected Areas (MPA) are areas set aside to protect marine ecosystems. They are an example of an area-based management measure relevant to EBA; others include integrated coastal management (ICM) and marine spatial planning (MSP). MPAs have a clearly defined geographical space, which is recognised, dedicated and managed (through legal or other effective means) to achieve long-term conservation of nature, along with associated ecosystem services and cultural values. | <ul> <li>Ecosystem approach</li> <li>Spatial analysis / modelling</li> <li>Ecosystem services</li> <li>Stakeholder engagement</li> <li>Holistic approach (i.e. takes into account economic, social and environmental aspects)</li> <li>Protect key biodiversity features</li> <li>Adaptive management</li> <li>Protect vulnerable / critical habitats and/or species</li> <li>Enforcement</li> <li>Performance monitoring</li> <li>Zoning</li> <li>Connectivity (terrestrial-marine)</li> <li>Building ecosystem resilience</li> </ul> | United Nations Environment Programme. (2017). Marine Protected Areas (MPAs). Retrieved from http://web.unep.org/coast al-eba/content/marine- protected-areas-mpas   |

Table 2.4 Definitions are core elements of Ridge to Reef Management

| Definition  | Core components   | Source  |
|---|---|---|
| Healthy and well-managed river basins and coastal areas where people and nature thrive, is the vision behind IUCN's initiative, 'Ridge to Reef' (R2R). () R2R aims to protect, demonstrate sustainable approaches, and provide better economic understanding of the links between salt and freshwater ecosystems. | <ul> <li>Protect key biodiversity features</li> <li>Ecosystem services</li> <li>Protect vulnerable / critical habitats and/or species</li> <li>Building ecosystem resilience</li> <li>Increase livelihood of Small Island Developing States (SIDS)</li> </ul> | International Union for<br>Conservation of Nature<br>(IUCN). (2017). Ridge to<br>Reef. Retrieved from<br>https://www.iucn.org/the<br>me/water/our-<br>work/ridge-reef |
| The goal of the () 'Ridge-to-Reef' (R2R) program is to maintain and   | <ul><li> Ecosystem services</li><li> Holistic approach (i.e. takes into account</li></ul>   | United Nations Sustainable Development  |

| Definition                              | Core components                    | Source                    |
|---|------------------------------------|---------------------------|
| enhance () countries' ecosystem         | economic, social and environmental | Platform. (2017).         |
| goods and services (provisioning,       | aspects)                           | PacSIDS Ridge to Reef     |
| regulating, supporting and cultural)    | Capacity building                  | Programme Partnership.    |
| through integrated approaches to land,  | Technology transfer                | Retrieved from            |
| water, forest, biodiversity and coastal | Information sharing                | https://sustainabledevelo |
| resource management that contribute to  |                                    | pment.un.org/partnership  |
| poverty reduction, sustainable          | ~@@                                | <u>/?p=7315</u>           |
| livelihoods and climate resilience.     |                                    |                           |

**Table 2.5 Definitions are core elements of Particularly Sensitive Sea Areas** 

| Definition  | Core components  | Source   |
|---|--|--|
| A Particularly Sensitive Sea Area (PSSA) is an area that needs special protection through action by the International Maritime Organisation (IMO) because of its significance for recognized ecological or socioeconomic or scientific reasons and which may be vulnerable to damage by international maritime activities.  | <ul> <li>Protect vulnerable / critical habitats and/or species</li> <li>Protect key biodiversity features</li> <li>Ecological rarity</li> <li>Controlled maritime activities</li> <li>Naturalness</li> <li>Cultural heritage</li> <li>Social, economic or human dependency</li> <li>Scientific or educational value</li> </ul> | International Maritime Organisation. (2006). Resolution A.982(24) Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas. Retrieved from http://www.imo.org/en/O urWork/Environment/PS SAs/Documents/A24- Res.982.pdf |
| Designation of a Particularly Sensitive Sea Area (PSSA) is a comprehensive management tool at the international level for reviewing attributes within an area that are vulnerable to damage by international shipping and for determining the most appropriate protective measures available through the International Maritime Organization (IMO) to address that vulnerability. | <ul> <li>Cultural heritage</li> <li>Ecological rarity</li> <li>Controlled maritime activities</li> <li>Protect vulnerable / critical habitats and/or species</li> <li>Protect key biodiversity features</li> </ul>   | Common Wadden Sea<br>Secretariat. (2017).<br>Shipping - Particularly<br>Sensitive Sea Area<br>(PSSA). Retrieved from<br>http://www.waddensea-<br>secretariat.org/managem<br>ent/shipping-particularly-<br>sensitive-sea-area-pssa                            |
| Valuable marine areas identified as at risk from international maritime activities.   | <ul> <li>Protect vulnerable / critical habitats and/or species</li> <li>Protect key biodiversity features</li> <li>Ecological rarity</li> <li>Controlled maritime activities</li> <li>Naturalness</li> </ul>   | UNEP-WCMC 2014,<br>Biodiversity A-Z<br>website:<br>www.biodiversitya-z.org,<br>UNEP-WCMC,<br>Cambridge, UK.  |

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