

Elaborating a Common Language

WP1 – Milestone 2, a glossary

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Introduction

The project PADDLE creates opportunities for researchers from multiple scientific disciplines (*i.e.* law, political science, public administration, sociology, geography, economics, marine ecology, biology and physics) and countries (Europe, Cabo Verde, Senegal and Brazil), with the objective to benefit from enriching interdisciplinary and intercultural experiences. Communication needs inside the consortium makes it necessary to develop a common language. The idea is to build shared representation, and to facilitate both training and innovation.

As the project's first year comes to an end, this glossary is a first step towards building a common understanding of key concepts in the field of marine spatial planning

For more information, you can reach out to the project's team at paddle@ird.fr

1. Why a Glossary?

The first step towards interdisciplinary scientific collaboration is mutual understanding and to speak the same scientific knowledge. We have observed at multiple occasions that key words' definitions vary from a discipline to another leading to confusions or, even worse to misinterpretations (table 1).

Writing this glossary in itself has set the foundations of interdisciplinary work, with people for which English isn't the mother tongue. It is the beginning of a living process, which will be completed run of the river. Upon the project's completion, this tool will be transferred to stakeholders

Table 1: Geographical, environmental and jurisdictional concepts¹

GEOGRAPHICAL AND ENVIRONMENTAL	JURISDICTIONAL
Area	Contiguous Zone
Coastal area	Continental Shelf
Coastal zone	Ecological Protection Zone
Coastal zone system	Exclusive Economic Zone
Environmental Impact Assessment	Fishing Zone
ICZM	High Seas
Interface	Historical Bays
Sustainability	Inland Water
Sustainable development	Straight Baselines
	Territorial Sea

2. Methodology

During the project's Kick-off meeting, we asked for a list of terms considered key to disciplines represented in each Work Package. Work Package members were then asked to provide definitions. The compilation of the definitions put to light a spectrum of similarities and differences. If possible, we privileged definitions shared inside the consortium. If it hasn't been possible to meet consensus, the discipline related to the proposed definition is precised.

¹ *Glossary of Concepts and Terms relating to Stakeholders and End-users in Participatory Processes*, Suárez de Vivero J., Martínez Alba I., SPICOSA, 2007.



3. Glossary structure

Several presentation options have been studied: per type (*i.e.* theoretical basis, principals and instruments), per theme or per discipline. *In fine*, the chosen presentation enables to underline the importance of the keywords' definitions while studying MSP processes. The limitation of the number of themes in comparison to other glossaries realised in the framework of research projects² enables alphabetical classification.

² COCORISCO (2014), SPICOSA (2007)



GLOSSARY

Baseline

"The normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as marked on large-scale charts officially recognized by the coastal State." **Source:** UNCLOS, article 5 of Part II, 1982

Biodiversity

Derives from the Greek bios 'life' and the Latin diversitās 'diversity, difference'; it corresponds to the degree of variation of the living world, including taxonomic and functional diversity of species, genetic diversity within species, as well as the diversity of habitats ecosystems and land- and seascapes

Coastal zone

"The coastal zone is defined as a strip of land and sea of varying width depending on the nature of the environment and management needs. It seldom corresponds to existing administrative or planning units. The natural coastal systems and the areas in which human activities involve the use of coastal resources may therefore extend well beyond the limit of territorial waters, and many kilometers inland." **Source:** EU, <http://ec.europa.eu/environment/iczm/situation.htm>

Connectivity

WP2: Two approaches are classically used to model connectivity: (i) the Lagrangian approach describes motion through following an individual element (particle, organism) as it moves through space and time; (ii) the Eulerian approach describes motion through focusing on specific locations in space through which the elements pass over time.

Continental Shelf

"The continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance." **Source:** UNCLOS, article 76 of Part VI, 1982

Ecosystem

WP2: derives from the Greek *oikos*, "home," and *systēma*, or "system". An ecosystem is the assemblage of interacting organisms (bacteria, archaea, protists, fungi, plants, animals, – the biocenose) in their abiotic environment (biotope or habitat)

Ecosystem process

WP2: Physical, chemical or biological activities or reactions that link organisms and their environment, such as production or decomposition

Exclusive Economic Zone

"The exclusive economic zone is an area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this Part, under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of this Convention. The exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured." **Source:** UNCLOS, article 55 and 57 of Part V, 1982

Extension of the Continental Shelf

"For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by either: (i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or (ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.



(b) In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base." **Source:** UNCLOS, article 76

Food-web

Assemblage of organisms from different trophic levels that share the same habitat (be it only temporally) and are linked to each other through trophic relationships, i.e., one eating the other. Classical trophic levels of a food web are (Primary) Producers (normally photosynthetically active plants), Primary Consumers = Secondary Producers (herbivores), Secondary Consumers (carnivores = predators), etc. Only few food webs encompass more than 4 trophic levels (top predators at the highest level), but owing to the fact that consumption of a food source may take place over more than one trophic level, and many organisms are omnivorous (i.e., they feed on multiple trophic levels, e.g., on both plants and animals), a clear assignment of a species to a trophic level is sometimes impossible, and thus, food webs consist of complex trophic interactions.

Habitat

Derives from the Latin habitāre 'to inhabit'. A habitat is the natural environment in which an organism lives, or the physical space in the environment that is suitable to provide an area to a set of organisms to live.

Integrated Coastal Zone Management (ICZM)

"Integrated Coastal Zone Management (ICZM) is a dynamic, multi-disciplinary and 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. ICZM uses the informed participation and co-operation of all stakeholders to assess the societal goals in a given coastal area, and to take actions towards meeting these objectives. ICZM seeks, over the long-term, to balance environmental, economic, social, cultural and recreational objectives, all within the limits set by natural dynamics. "Integrated" in ICZM refers to the integration of objectives and also to the integration of the many instruments needed to meet these objectives. It means integration of all relevant policy areas, sectors, and levels of administration. It means integration of the terrestrial and marine components of the target territory, in both time and space." **Source:** EU, COM (2000) 547 final

Management Plan

"A written, circulated and approved document which describes the site or area and the problems and opportunities for management of its nature conservation, land form or landscape features, enabling objectives based on this information to be met through relevant work over a stated period of time" (Eurosites 1999); ii) "the guide by which Parks Canada manages the resources and uses of a national park. It contains the management objectives and the means and strategies for achieving them. The plan is not an end in itself; rather it constitutes a framework within which subsequent management, implementation and planning will take place" (Parks Canada 1978). iii) "a document that guides and controls the management of a protected area. It details the resources, uses, facilities and personnel needed to manage the area in the future. It is a working document that presents a program for the coming 5–10 years" (Ndosi 1992). iv) "a document that guides and controls the management of protected area resources, the uses of the area and the development of facilities needed to support that management and use. Thus a Management Plan is a working document to guide and facilitate all development activities and all management activities to be implemented in an area" (Thorsell 1995). v) "a document that sets forth the basic and development philosophy of the park and provides strategies for solving problems and achieving identified management objectives over a ten-year period. Based on these strategies, programs, actions and support facilities necessary for efficient park operations, visitor use and human benefit are identified. Throughout the planning effort, the park is considered in a regional context that influences and is influenced by it" (Young and Young 1993)."

Source: <https://portals.iucn.org/library/efiles/documents/pag-010.pdf>

Marine Protected Area

"Marine Protected Areas (MPAs) involve the protective management of natural areas so as to keep them in their natural state. MPAs can be conserved for a number of reasons including economic resources, biodiversity conservation, and species protection. They are created by



delineating zones with permitted and non-permitted uses within that zone." ii) "Any area of inter-tidal or sub-tidal 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" **Source:** IUCN

Marine Spatial Planning

"Process by which the relevant state's authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives." **Source:** MSP Directive EU 2014

Ocean Governance

"Is about managing and using the world's oceans and their resources in ways that keep our oceans healthy, productive, safe, secure and resilient." **Source:** EU, https://ec.europa.eu/maritimeaffairs/policy/ocean-governance_en

Oligo-/meso-/eu-trophic

An oligotrophic aquatic ecosystem is characterised by low primary productivity, as a result of low nutrient content. These ecosystems often have very clear waters. The oxygen content is high.

Pelagic/demersal/benthic domain

Pelagic is derived from the Greek pélagos, 'open sea'. It consists of the water column of the open ocean. Organisms that live in the pelagic zone are called pelagic organisms.

Benthic is derived from the Greek benthos, "the depths". The benthic zone is the ecological region at the very bottom of the sea. It includes the sediment surface and some subsurface layers. Marine organisms living in this zone are called benthos.

Demersal is derived from the Latin demersus, "the descent". The demersal zone is the part of the sea consisting of the part of the water column near to, and significantly affected by, the seabed and the benthos.

Resilience

Derives from Latin resilire "to spring back" it is the capacity of an ecosystem to respond to a perturbation or disturbance by resisting damage and recovering quickly/recovering its original state.

Territorial sea

"The sovereignty of a coastal State extends, beyond its land territory and internal waters and, in the case of an archipelagic State, its archipelagic waters, to an adjacent belt of sea, described as the territorial sea. This sovereignty extends to the air space over the territorial sea as well as to its bed and subsoil. Every State has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baselines determined in accordance with this Convention." **Source:** UNCLOS, article 2 and 3 of Part II, 1982

Upwelling

Upwelling is a wind-driven oceanographical process in which deep, cold and generally nutrient-rich water rises toward the surface. The nutrient-rich upwelled water stimulates the growth and reproduction of primary producers such as phytoplankton.

Zoning plan

"These are produced when different areas or 'zones' of a protected area are to be managed in different ways. They identify the boundaries of the zones and contain detail on how each of the zones is to be managed.² Zoning plans provide additional definition and help implement the Management Plan, and are sometimes a part of it." **Source:** IUCN

