# Shared vocabulary of protection-related terminology

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# Vocabulary of protection-related terminology

This vocabulary of protection-related terminology should be considered a living document and, the first step towards achieving approved regionally agreed definitions of terminology for the Baltic Sea region. Additional terms can be introduced to the vocabulary at any time. The original source of the definition(s) is presented in brackets. Terms are presented in alphabetical order. The draft vocabulary has been prepared with support from the PROTECT BALTIC project.



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### Abundance (ecological)

- The size of a population of a particular life form in a given area. (IPBES)

### Adaptive management

- A systematic process for continually improving management policies and practices by learning from the outcomes of previously employed policies and practices. In active adaptive management, management is treated as a deliberate experiment for purposes of learning. (IPBES)

### Area-based management tool

- A tool, including a marine protected area, for a geographically defined area through which one or several sectors or activities are managed with the aim of achieving particular conservation and/or sustainable use objectives.

### Benthic

- Connected with, or living near, the sea bottom. (IUCN)
- Occurring at the bottom of a body of water; related to benthos. (IPBES)

### Biodiversity

- The variability among living organisms from all sources including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, among species, and of ecosystems (CBD, IUCN).
- The variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part. This includes variation in genetic, phenotypic, phylogenetic, and functional attributes, as well as changes in abundance and distribution over time and space within and among species, biological communities and ecosystems. (Diaz et al. 2015. “The IPBES Conceptual Framework — Connecting Nature and People.” Current Opinion in Environmental Sustainability 14: 1–16. doi:10.1016/j.cosust.2014.11.002)

### Coherence

- The situation when the parts of something fit together in a natural or reasonable way (Cambridge Dictionary)

### Critical natural capital

- Describes the part of the natural capital that is crucial for the functioning of the ecosystem, that cannot be replaced, and hence is vital for the provision of the ecosystem services.

### Community (ecological)

- assemblages of interacting populations of the species living within a particular area or habitat. (Encyclopedia Britannica)

- a group of actually or potentially interacting species living in the same location. Communities are bound together by a shared environment and a network of influence each species has on the other. (Nature)
- populations of different species, includes the study of the interactions between species, such as mutualism, predation and competition, and the dynamics and structure of the community. (Nature)

### (Ecological) connectivity

- The unimpeded movement of species and the flow of natural processes that sustain life on Earth. [UNEP/CMS/Resolution 12.26 (Rev.COP13)].
- An essential feature of nature. It is necessary for the functionality of ecosystems, underpinning key ecological processes and features such as maintenance of genetic diversity, flow of energy and organisms, hydrological processes, nutrient cycling, pollination, seed dispersal and disease resistance across all biomes and spatial scales. It is key for the survival of wild animals and plant species and is crucial to ensuring their migration. (IPBES/9/INF/27)
- **Habitat connectivity**: The degree to which the landscape facilitates the movement of organisms (animals, plant reproductive structures, pollen, pollinators, spores, etc.) and other environmentally important resources (e.g. nutrients and moisture) between similar habitats. Connectivity is hampered by fragmentation (q.v.).(IPBES)

### Distribution

- The spatial occurrence of an ecosystem or species (IUCN).

### Disturbance (event)

- An event that causes a change in environmental conditions that interfere with ecosystem function. (IUCN)

### Ecological coherence (of MPAs)

- Interacts with and supports the wider environment;
- Maintains the processes, functions and structures of the intended protected features across their natural range;
- Functions synergistically as a whole, such that the individual protected sites benefit from each other in order to achieve the other two objectives.

Additionally, an ecologically coherent network of MPA may:

Be designed to be resilient to changing conditions. (OSPAR 2006)

### Ecological integrity

- Maintaining the diversity and quality of ecosystems and enhancing their capacity to adapt to change and provide for the needs of future generations. (IUCN)

### Ecological dynamics

- Those intrinsic ecological functions through which an ecosystem becomes self-regulating, self-sustaining, and capable of recovery from external forces (for example, damaging storm events). These intrinsic processes may cause continual change in biotic composition and structure at specific localities. Collectively, these changes represent internal flux, rather than substantive and permanent alteration of the ecosystem regionally. (Biology online)

### Ecosystem

- A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. (Article 2, CBD, IPBES)
- Ecosystems are self-regulating communities of plants and animals interacting with each other and with their non-living environment (CBD)

### Ecosystem Approach

- An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organization, The ecosystem approach is based upon the hierarchical nature of biological diversity characterized by the interaction and integration of genes, species and ecosystems, which encompass the essential structure, processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of many ecosystems. The ecosystem approach should be undertaken at the appropriate spatial and temporal scales. (CBD)
- A strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (IUCN)

### Ecosystem-based management (EBM)

- A process that integrates biological, social, and economic factors into a comprehensive strategy aimed at protecting and enhancing sustainability, diversity and productivity of natural resources. The ecosystems (biosphere) are considered the fundament for social and economic development.
- EBM emphasizes the protection of ecosystem structure, functioning and key processes; is place-based in focusing on a specific ecosystem and the range of activities affecting it; explicitly accounts for the interconnectedness among systems, such as between air, land and sea; and integrates ecological, social, economic and institutional perspectives, recognizing their strong interdependences (COMPASS Scientific Consensus Statement, used by IUCN).
- A process that aims to link the conservation of marine resources with an integrated management of different human maritime activities. This approach helps to reduce the cumulative impacts on the environment caused by multiple human activities. EBM is a key tool for sustainable management by balancing between economic,

environmental, social and other interests in spatial allocations, by managing specific uses and coherently integrating sectoral planning, and by applying the ecosystem approach, When balancing interests and allocating uses in space and time, long-term and sustainable management should have priority. (HELCOM-VASAB)

### Ecosystem function

- The process through which the constituent living and nonliving elements of ecosystems change and interact (ForestERA, 2005, supported by IUCN)
- The flow of energy and materials through the biotic and abiotic components of an ecosystem. It includes many processes such as biomass production, trophic transfer through plants and animals, nutrient cycling, water dynamics and heat transfer. (IPBES, Adapted from http://www.ecosystemservicesseq.com.au/ecosystem-functions.html)

### Ecosystem integrity

- The continuity and full character of a complex system, including its ability to perform all the essential functions throughout its geographic setting; the integrity concept within a managed system implies maintaining key components and processes throughout time. (IUCN)

### Ecosystem resilience

- The capacity of a system to recover from stress and disturbance while retaining its essential functions, structure, feedbacks and identity. Resilient ecosystems sustain biological diversity and human livelihoods in times of severe and wide-ranging change. (IUCN)
- Ecosystem functioning and resilience depends on a dynamic relationship within species, among species and between species and their abiotic environment, as well as the physical and chemical interactions within the environment. The conservation and, where appropriate, restoration of these interactions and processes is of greater significance for the long-term maintenance of biological diversity than simply protection of species. (CBD)
- The capacity of an ecosystem to return to the pre-condition state following a perturbation, including maintaining its essential characteristics taxonomic composition, structures, ecosystem functions, and process rates. (Holling 1973)
- The level of disturbance that an ecosystem or society can undergo without crossing a threshold to a situation with different structure or outputs. Resilience depends on factors such as ecological dynamics as well as the organizational and institutional capacity to understand, manage, and respond to these dynamics. (IPBES)

### Ecosystem restoration

- Recovery of the structure, function and processes of the original ecosystem. (IUCN)

### Ecosystem structure

- The individuals and communities of plants and animals of which an ecosystem is composed, their age and spatial distribution, and the non-living natural resources present (APEX, 2004, supported by IUCN).

### Functional diversity

- The number of functionally different groups of species. It consists of two aspects: one that affects the influence of a function within a scale (see 'levels of biological organization' above) and the other that aggregates that influence across scales. (Hooper and Vitousek 1997)

### Governance

- A comprehensive and inclusive concept of the full range of means for deciding, managing, implementing and monitoring actions and measures, including policies. Whereas government is defined strictly in terms of the nation-state, the more inclusive concept of governance recognizes the contributions of various levels of government (global, international, regional, sub-national and local) and the contributing roles of the private sector, of non-governmental actors, and of civil society to addressing the many types of issues from local to global levels (IPBES, adapted from IPCC, 2018).
- For controlling and organizing a company.

### Marine protected area (MPA)

- An area of sea (or coast) especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means. (CBD)
- An area with sustainable use consistent with conservation objectives.

### Mitigation

- An intervention to reduce negative or unsustainable uses of biodiversity and ecosystems. (IPBES)

### Natural

- Existing in or derived from nature; not made or caused by humankind (Oxford Dictionary)

### Quality (of habitats & biotopes)

- The ability of the environment to provide conditions appropriate for individual and population persistence. (Hall et al. (1997:175))

### Representativity

- Representativity is captured by a network when the network consists of areas representing the different biogeographical subdivisions of the sea, which in turn reflect the full range of ecosystems, including the biotic and habitat diversity of those marine ecosystems.

- This also corresponds to the integrity, or the degree to which the area, either alone or in association with other protected areas, encompasses a complete ecosystem.

### Restoration

- Activities that initiate or accelerate the recovery of an ecosystem from a degraded state.
- **Passive / natural restoration**: Ending degradation, e.g. removal of contamination source, restriction of water flow, modifying inappropriate grazing /fire regimes, cessation of logging, agricultural land retirement.
- **Active / assisted restoration**: A combination of the above strategy with abiotic and biotic interventions, e.g. *Abiotic*; Active remediation of substrate conditions (physical or chemical), habitat creation, reshaping watercourses, reintroduction of environmental water flows, applying artificial disturbance to promote seed germination. And *Biotic*; Invasive species management, reintroduction of species, augmenting or reinforcing depleted populations of species**.**
- **Reconstructive restoration**: A combination of the above strategies with the reintroduction of a major proportion of the desired biota. Possibly mimicking natural successional dynamics.
  (Atkinson & Bonser 2020, Restoration Ecology)

### Risk assessment (ecological)

- The process for evaluating how likely it is that the environment might be impacted as a result of exposure to one or more environmental stressors, such as chemicals, land-use change, disease, and invasive species. (EPA)
  https://www.epa.gov/risk/ecological-risk-assessment

### Sustainability

- A characteristic or state whereby the needs of the present and local population can be met without compromising the ability of future generations or populations in other locations to meet their needs. (IPBES, from: Millennium Ecosystem Assessment,
  https://www.millenniumassessment.org/documents/document.59.aspx.pdf )

### Sustainable development

- Development that meets the needs and aspirations of the current generation without compromising the ability to meet those of future generations. (CBD)

### Sustainable use (of biodiversity and its components)

- The use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. (CBD, 1992, IPBES)

### Threatened species

- Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. (IUCN, CBD)
- In the IUCN Red List terminology, a threatened species is any species listed in the Red List categories Critically Endangered, Endangered, or Vulnerable. See https://portals.iucn.org/library/efiles/documents/RL-2001-001-2nd.pdf (IPBES)

### Thrive

- to grow or develop successfully: to flourish or succeed (The Britannica Dictionary)

### Viable population

- A population large enough for long-term survival (IUCN)