# Environment

## Conclusion and recommendation

## The environmental aspect is one of the most important elements affecting the spatial planning process, which is a fundamental and important tool for environmental protection and management. Thus, in the whole process of planning, defining the directions of development, should take into account the principles of environmental protection. All planning elaborations must also introduce arrangements to ensure the protection and restoration of the environmental damage.

## Background

 The sector of "environment" includes all inanimate and animate elements, both natural and caused by human activities occurring in a particular area and their interrelationships, interactions and relationships.

 Taking into account the degree of conversion, the environment can be divided into:

* natural environment (natural)
* anthropogenic environment,
* an artificial environment,
* degraded environment.

 Natural environment (environment) is one of the most important element in spatial planning. It is a whole animated and inanimate elements of nature, closely related to each other, surrounding living organisms. Within its framework we can distinguish the following elements:

* geological structure,
* relief,
* climate,
* water relations,
* soil,
* living organisms.

 One of the essential characteristics of the natural environment is a natural equilibrium, which occurs when the ebb and flow of energy and matter in nature are balanced. The natural environment is in constant interaction with human.

 Environmental protection is a range of actions to repair the damage caused or prevent infliction of physical surroundings or natural resources, as well as action to reduce the risk of such damage or to lead to more efficient use of natural resources, including energy-saving measures and the use of renewable energy sources .

 Protecting the environment is the basis for spatial development policy, development strategy and the development of spatial plans. This protection consists in particular of rational management of the environment and management of environmental resources in accordance with the principle of sustainable development, pollution prevention, and to restore the natural elements to the proper state.

 The basic principle of spatial policy is to provide spatial orderliness and conditions for sustainable development, i.e. the spatial organization that would eliminate conflicts between environmental protection and economic development and activities to improve the living conditions of residents.

 Planning documents should therefore establish conditions for implementation of projects, which can produce optimal results in terms of environmental protection, pointing to efforts to maintain the natural balance and rational management of environmental resources, and establish a proportion to preserve or restore the natural balance and proper living conditions, as well as the manner of management of areas degraded by human activities or natural disasters.

 In order to meet the above conditions one should take such action, which through its implementation will achieve good environmental status not only in the regional and national level but also, as it is for instance in relation to maritime spatial planning, in the transnational level.

**Analysis of the topic/sector**

At the core of the concept of spatial planning is an ecosystem approach, which should be considered an advantage of natural values and the consequential desire to preserve the ecological balance in the basic ecosystems. Protection of natural values is performed in the framework of:

* Spatial (territorial) forms of protection: national parks, nature reserves, landscape parks, Natura 2000 sites;
* Protection of species of plants and animals.

 In order to analyze the above issues it is necessary to gather information that will enable the location of the forms of nature conservation (establishing acts) and the object of protection (habitat, species of plants and animals) in these areas. In addition, you should get information on prohibitions or injunctions applicable to the surface forms of nature and objects of protection. It should also be pointed out that forms of surface protection or protected subject matter - should be a priority in the region, the country and the transnational area for planning actions.

**Requirements for the sector**

The relationship between environmental protection and the purpose of individual areas in spatial planning of marine areas should mutually penetrate. Therefore, we will include in it the conditions resulting among other things from the current state of the environment, the size and quality of water resources and nature conservation requirements.

The condition for drawing up proper spatial plan for marine areas is gathering and analyzing information on the natural values of a body of water in order to determine the places most valuable, but also sensitive to any kind of human intervention, the valorisation of marine space for individual elements of the environment including both quantitative as well as quality criteria.

The quantitative criteria include:

* number, biomass of species (eg. High concentration of wintering waterbirds)
* species richness (biodiversity).

Quality criteria are the following:

* rarity of species / habitats (uniqueness)
* naturalness (degree of conservation of group / intact habitat).
* presence of protected species / habitat,
* significance of species / habitats for ecological processes.

 Because for the proper functioning of the ecosystem, very important is its ecological coherence, in determining the values of marine areas (POM) are considered both a spatial dimension - the significance of a particular place for the individual element of environment - and temporal dimension of requirements of individual elements of ecosystem for a specified quality marine space. It is primarily to preserve the ability of individual elements of biota (living organisms) to access important areas in their development cycle – dedicated to breeding, resting and feeding.

**Current use**

Due attention should be payed to the current issues which determine the state of the environment including the state of nature conservation in the area covered by spatial planning. Important issue is to determine and identify all activities that affect the environment, both activities implemented or planned for implementation.

In the south-western Baltic Sea area it is considered necessary to undertake the following activities related to environmental and nature protection, which will be used for the process of maritime spatial planning:

* Identification of protected areas - existing and proposed to be protected, taking into account EU legislation (the Birds and Habitats Directives - Natura 2000, HELCOM MPAs) and national (national parks, nature reserves and other national forms of nature conservation).
* Verification of prohibitions and injunctions in relation to the forms of nature conservation in individual countries and determination whether there is the same or a different approach to the same forms of nature conservation.
* Analysis of issues related to fisheries.
* Verification of procedures and requirements arising from the environmental impact assessment and strategic environmental impact assessments in individual countries - with respect to the impact of planned investments /spatial plans in protected areas.
* Comparison of public participation procedures in each country in proceedings for environmental impact assessment and strategic environmental impact assessments.

 Regulations

 In order to determine the role of environmental protection one should pay attention to selected legal conditions which sanction the role and importance of all activities that may have an impact on the environment and nature. There are a number of legal acts governing the matter of protection of Baltic Sea waters. These include, inter alia:

* Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention 1992);
* Convention "On the Law of the Sea" (UNCLOS, 1982);
* International Convention for the Prevention of Pollution from Ships (MARPOL 73/78);
* Convention "On fishing and conservation of living resources in the Baltic Sea and the Belts" (Gdansk Convention, 1973);
* Convention on biological biodiversity" (Rio de Janeiro Convention, 1992);
* Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991) - the 'Espoo (EIA) Convention';
* Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, and Protocol (London Convention, 1972);
* International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention, 2004);
* EU Directives: Habitats, Water, Marine Strategy, Nitrate.

 Objectives and tasks related to environmental protection have been identified in a number of documents of a legislative and program nature.

 Analysis of the above regulations should cover the most important documents in force at international level, including the Community and national levels. In that analysis the following goals should be included:

* to ensure a sustainable and durable development of coastal communities,
* to ensure good status of marine and land-sea ecosystems,
* to ensure a safe, sustainable and durable use of the sea,
* economical use of space, which leaves as much as possible space for the future, including currently unknown, methods of use of the sea,
* to ensuring the preservation and protection of historical values,
* application of the arrangements for not only space, but time as well.

Potential conflicts with other sea uses

 The important environmental problems in spatial planning in the south - western Baltic are:

1. determination on the basis of existing data (eg. Protection plans for nature conservation forms) on the presence of protected marine and coastal habitats, valuable and rare species of plants and animals, as well as the comparison of protected objects in the neighboring cross-border protected areas
2. identification of existing and potential threats to the natural values of the analyzed area, to preservation of favorable conservation status of natural habitats and species of plants and animals and their habitats which are objects of protection, for example in Natura 2000 sites (e.g. anthropopressure, discharges of sewage and geothermal brines , extraction of aggregates, post-war warfare agents).
3. laying down the conditions to maintain or restore a favorable conservation status of objects of protection in protected areas (e.g. in Natura 2000 sites),
4. analysis of existing and proposed activities at sea and in the coastal zone, the implementation of which may have an impact on the marine environment in a transboundary context, e.g.:
	1. the location of marine and land projects likely have a significant impact on the environment and projects that could potentially have a significant impact on the environment,
	2. measures related to the coastal protection and analysis of the impact of these activities on hydro-morphological processes of seabed and shores and natural processes.
	3. development of port infrastructure, tourism (fairways, anchorages, piers, harbors, marinas)
5. drawing attention to climate issues, because the whole marine ecosystem is a system of dependent relationship, where an imbalance e.g. due to pollution caused by human activities (discharges, changes in physico-chemical parameters of water) affect climate and its changes have serious consequences for the environment , economy and society.

**Future needs and use**

The marine environment (including the conservation status of Natura 2000 sites) is influenced by many anthropogenic factors. Their effects can include changes in ecosystems (including those relating to habitats and populations of species), degradation or loss of biodiversity and water contamination. Among the factors that may in the future cause these transformations in the marine environment are:

1. intentional or accidental introduction of alien, invasive species (e.g. species transferred from ballast water or so called „fugitives from breeding”);
2. pollution (causing changes in species composition) from the land, from ships or which result from deliberate dumping of materials, and noise (including sonar devices);
3. prospecting and exploration of mineral deposits of subsea oil and gas; the adverse impacts on the marine environment may include noise, discharge of waste into the sea, causing oil spills disasters by platforms;
4. dredging of shipping lanes and sand and gravel extraction causes the degradation of seabed habitat;
5. fisheries (including aquaculture) leads to changes in food chains, changes in habitats (e.g caused by fishing with bottom trawls); another problem is the excessive overfishing of certain species that may lead to their extinction at the local level;
6. commercial shipping - or more precisely: shipping accidents, oil pollution, discharge of ballast water;
7. army/military activity - most reservations concerns the impact of sonar on marine mammals and protected fish and their behavior;
8. the production of electricity at sea (offshore wind farms, tidal power, etc.), the construction phase especially of wind power plants may adversely affect the landscape, disrupt migration routes of animals; the objects themselves cause noise and electromagnetic fields
9. tourism (recreational shipping, diving and other water sports and leisure activities) - excessive tourist traffic causes the degradation of coastal zones, noise frightens animals, due to trampling or misalignment may be destroyed eggs and chicks of nesting birds directly on the sand, in addition, with respect to the coastal zone, the state of preservation and integrity of Natura 2000 areas could be affected by the following: development of residential areas, touristic-recreational objects, technical infrastructure, mining of sand for building needs or to adjust the beaches, the determination of sewage discharge sites and to protect the coast against erosion.hat plans for future uses exists?

**Transboundary implications**

In order to ensure consistency of cross-border procedures, during environmental proceedings in relation to the activities in marine areas, one should identify the sites posing a potential or existing conflicts with environmental background. Any action that may have an impact on the environment should be analyzed in a broader sense, inter alia taking into account the location, because the sea area contains no barriers and boundaries that could inhibit the spread of influence.

**Planning evidence**

**Motive/discussion for including this topic/sector in the project**

 From the submitted information relating to the environment should be noted that this aspect should be subject to special attention, because protection and preservation of the environment is a priority action in the planning process. It should be noted that the concept of sustainable development which is socio-economic development, in which the political, economic and social activities are integrated, maintaining natural balance and permanence of basic natural processes in order to guarantee the ability to meet the basic needs of communities or citizens both of the contemporary generation as well as future generations. Formation and protection of the environment generally understood as measures aimed at halting the degradation and improvement of the natural environment are the elements of eco-development. Eco-development in practice means integration activities within the spatial orderliness, determining the need for a new approach to spatial planning and spatial policy making. Therefore, spatial planning should take into account environmental considerations related to:

* status of the environment, size and quality of water resources and nature and environmental requirements, and cultural landscape;
* protection of the earth's surface and soil, for example reclamation of existing industrial landfills and management of areas featuring weak and poor natural conditions,
* protection of areas with valuable natural and landscape values;
* Protection of areas in need of restructuring or rehabilitation;
* Protection of animals and plants, including establishing a system of protected areas of nature and the landscape;
* Protection of symptomatic documented mineral resources.

 These principles may as well have reference to marine areas.

 The purpose of planning the is "the efficient use of space, which leaves as much as possible space for the future, including those not yet known, methods of use of the sea. In order to facilitate the conservation and sustainable use of the Baltic Sea rules of maritime spatial planning (HELCOM-VASAB 2012) have been developed. The overriding principle is the so-called „ecosystem approach”, which requires inter-sectoral and sustainable management of human activities, and its objective is to achieve good status of the Baltic Sea ecosystem. Sustainable management is to reconcile the of economic, social and environmental interests. The environmental aspect is therefore one of the most important elements of planning. Natural conditions apply to practically any space, covering both the natural characteristics of the area, as well as their legal status.