

Land-Sea Interactions in Realisation of Ecosystem Approach in the Marine Spatial Planning in the Baltic Sea Region – Polish Perspective

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Abstract: Maritime spatial planning has become one of the fundamental instruments of managing human activity at the sea. It is mostly due to the rising competition for marine space, which is a consequence of rising number and variety of uses of the sea. Among the principles of marine spatial planning ecosystem approach as well as the taking into account the interaction between land and sea seem to play the most important role. First one is more general and axiological in its nature, while the second functions more as technical guide for planners. Together they can be called guiding principles of marine spatial planning. Ecosystem approach is a concept closely related to ecosystem services. Its main aim is to sustain the productivity of ecosystems in the field of ecosystem services, what is often connotated with the health of the marine ecosystem. Multiple correlations between land and sea can be easily seen in the managerial goals of the marine ecosystem. Trophic relations seem to be reflected in legal regulations, but the question remains if the marine spatial planning regime really reflects the interactions between land and the sea.

1. The concept of planning and spatial development of sea areas and its normative implementation

Planned spatial management seems to be a natural component of the functioning of organized societies, the origins of which are believed to be in settlement, which entails: the creation of permanent human clusters (constituting the prototypes of later cities), the construction of roads-routes connecting these clusters and infrastructure for defense purposes. The degree of intensity of activities consisting in establishing the principles, methods and conditions of spatial development was and is also the result of limited resources, such as areas located in urbanized areas. Also, for some time now, these principles, methods and conditions of spatial management have been given a normative form. Until recently, spatial planning and accompanying legal regulations applied almost exclusively to land areas. However, when the apparent vastness of seas and oceans has become today the subject of unprecedented exploitation of many areas of the economy and satisfying various social needs, the planned management of sea areas has now become a necessity. It should be noted that the traditional use of sea areas for transport, fishing and military purposes, dominant until the 20 century, has now been significantly extended to new fields of exploitation. Currently, the maritime space is not only economically attractive transport routes or an area of fishing activity, but at the same time a space for dynamically developing aquaculture, installation and operation of transmission infrastructure devices, a place for obtaining renewable energy sources and marine genetic resources, an area of activity in the mining industry, and finally a place practicing various sports, leisure and recreation. It cannot be ignored that sea areas are a space of interdisciplinary scientific and research activity and a space with numerous documented cultural goods under legal protection.

Thus, it is clearly visible that the significantly expanding sphere of the fields of sea exploitation makes the sea areas similar in this respect to land areas, and just like on land, also at sea, problems arise and conflicts arise related to the use and use of space. On land, the basic instrument for solving these problems and conflicts are the arrangements for spatial development plans. Therefore, it does not seem unusual that the multiplicity of forms of using sea areas, which also contributes to the increase in the scale and intensity of this use, prompts the use of legal and planning instruments

conducive to the rationalization of spatial management, proven in land territories.

The phenomena and processes mentioned above became a material impulse for discussion in national and international forums, and then for the commencement of works on spatial development plans at the beginning of the 21 century, which took the form of pilot plans. It should be noted, however, that the first act of maritime spatial planning is the Australian Great Barrier Reef Zone Plan adopted at the beginning of the 1980s, although it was not a spatial development plan in the strict sense, but rather an area management plan with significant ecological values.

Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 has become the formal and legal imperative of drawing up maritime spatial development plans for the Member States of the European Union that have access to the sea, establishing a framework for maritime spatial planning (hereinafter: Directive 2014/89/EU) which entered into force on 17 September 2014. Directive 2014/89/EU requires Member States with access to the sea to prepare maritime development plans as soon as possible, indicating 31 March 2021 as the final date for the implementation of this obligation. Directive 2014/89/EU also adopted the date of 18 September 2016, specifying the deadline for introducing or modifying the existing national regulations specifying the principles, methods and procedure for the preparation and establishment of maritime spatial development plans, consistent with its guidelines and necessary for its implementation.

The first regulations concerning maritime spatial planning were introduced into the Polish system by the Act of 27 March 2003 on spatial planning and development. However, this matter was not included together with the provisions regulating the principles and procedure of shaping the spatial order on land, but was included in the Act of March 21, 1991 on the maritime areas of the Republic of Poland and maritime administration. [Marine Areas of the Republic of Poland and Maritime Administration Act], amended by the Act on spatial planning and development. The regulation of maritime spatial planning at that time was extremely laconic and boiled down to two articles, which entrusted the public administration bodies mentioned therein with the powers to take appropriate planning activities and included an authorization for the competent minister to define, by way of a regulation, the required scope of spatial development plans for

Polish sea areas. Therefore, in the light of the requirements of Directive 2014/89 / EU, the existing, one might say trace regulation should have been developed, which was achieved (although far from systemic regulation - in the sense of a complete one) thanks to another amendment to the Act made in 2015.

2. Principles of maritime spatial planning

The conditions laid down in Directive 2014/89 / EU, as its title itself indicates, are of a general nature. Hence, its content has been dominated by general principles that relate to maritime spatial planning and the planning acts themselves, including the procedure for their preparation and adoption. Therefore, on the basis of the provisions of Directive 2014/89/EU and the recitals preceding them, it is possible to reconstruct, beyond the status of program standards, the principles of: 1) completeness and continuity of maritime planning; 2) planning independence of the Member States; 3) co-operation in the planning process; 4) the ecosystem approach; and 5) taking into account the interaction between land and sea.

The principle of completeness and continuity of maritime planning applies to both the spatial extent of the adopted plans and the completeness of the planning process. The normative source of this principle are the provisions of Art. 2 clause 4 of Directive 2014/89/EU and its 18 recital. In art. 2 clause 4 in the second sentence says that the application of the above directive does not affect the designation and delimitation of maritime borders by the Member States in accordance with the relevant provisions of UNCLOS. This in turn means, especially taking into account Art. 4 sec. 1 of Directive 2014/89/EU, according to which each Member State establishes and implements maritime spatial planning, covering by spatial planning acts all maritime areas under the jurisdiction of a Member State of the European Union. In turn, in the first part of recital 18 of Directive 2014/89/EU, it is indicated that: “Maritime spatial planning should cover the entire cycle of problem and opportunity identification, information gathering, planning, decision making, implementation, review or updating and monitoring of implementation” According to this maritime spatial planning does not end with the adoption of relevant planning acts, but is a continuous process. This is further confirmed in Art. 6 sec. 3 of the Directive, stipulating that:

“Maritime spatial plans are subject to reviews by the Member States, in the manner specified by these countries, but at least every ten years.”

The principle of planning independence of the Member States is shaped by the provisions of Art. 2 sec. 4, art. 4 sec. 3 and art. 5 sec. 3 of Directive 2014/89/EU. It follows from them that the Member States retain sovereign rights and jurisdiction over sea waters. The provisions of Directive 2014/89 do not affect the competence of the Member States to plan and determine the form and content of that plan or plans. The directive does not affect the competence of the Member States to decide how to achieve the objectives set out therein, including how these objectives will be reflected in the established maritime spatial development plan or plans. Also, the adopted institutional solutions aimed at achieving the objectives of the directive are the responsibility of individual states.

Referring to the normative sources of the principle of cooperation in the process of planning maritime areas, it is necessary to indicate in particular recitals 20, 21 and 24 as well as Articles 6, 9, 10 sec. 1, as well as in art. 11, 12 and 14 of Directive 2014/89/EU. It follows from them that the authorities of the Member States, equipped by national law with the competence to undertake and conduct activities in the field of maritime spatial planning, are obliged to cooperate with the competent entities of other Member States and third countries and with national authorities, institutions and entities interested in the arrangements drawn up and adopted spatial development plans for sea areas.

The ecosystem approach (the essence, genesis and development of which will be presented later in this study) appears in the context of the legal principle of maritime spatial planning as a key way to achieve the goals of maritime spatial planning, and thus a basic condition for the transposition of Directive 2014/89/EU. According to Art. 5 sec. 1 of Directive 2014/89, “When establishing and implementing maritime spatial planning, Member States shall take into account economic, social and environmental aspects to support sustainable development and growth in the maritime sector, applying an ecosystem approach and supporting the coexistence of appropriate activities and uses.” The cited provision shows that the general goal of maritime spatial planning is to support sustainable development and growth in the maritime sector, and the indicated way to achieve this goal is to use the ecosystem approach.

It should be noted here that there are reservations in the literature as to the recognition of the ecosystem approach as a legal principle¹, justified by its non-legal origin². In connection with these reservations, at least two arguments in favor of the (also) juridical nature of this principle: The first is the very use of the formula of the ecosystem approach in the content of base-creating normative acts, which include Directive 2014/89 / EU, but not only. The approach to the management of human activities in ecosystem-based marine strategies aimed at achieving and maintaining good ecological status of the marine environment is also mentioned in Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)³. According to Art. 1 sec. 3 of the Directive cited above: “Marine strategies apply an ecosystem-based approach to the management of human activities, ensuring that the collective pressure exerted by such activities is maintained at a level that allows for the achievement of good ecological status of the environment and that the capacity of marine *ecosystems* to respond to changes caused by humans are not endangered, while allowing the sustainable use of marine resources and services by present and future generations.”

The second argument in favor of the juridical character of the principle of the ecosystem approach is its relation to the principle of sustainable development. Well, the principle of sustainable development, considered a legal principle in the sense of a directive⁴ of a general nature, included in the acts situated at the highest levels in the hierarchy of the legal system⁵,

¹ See e.g. Dorota Pyć, “Podejście ekosystemowe do morskiego planowania przestrzennego jako praktyka w zarządzaniu działalnością człowieka,” in *Europeizacja prawa morskiego*, ed. Magdalena Adamowicz, Justyna Nawrot (Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego 2016), 20–21.

² cf. Dorota Pyć, “Podejście ekosystemowe,” 17 et seq. See also Aantonia Zervaki, “Introducing Maritime Spatial Planning Legislation in the EU: Fishing in Troubled Waters?,” *Maritime Safety and Security Law Journal*, no. 1 (2015): 99 and further.

³ Journal Of EU L 164 of June 25, 2008, as amended, 19.

⁴ Zbigniew Bukowski, *Zrównoważony rozwój w systemie prawa* (Toruń: TNOiK, 2009), 43–45.

⁵ The principle of sustainable development in the system of Polish law has acquired the rank of a constitutional principle. According to Art. 5 of the Constitution of the Republic of Poland of April 2, 1997 (Journal of Laws No. 78, item 483, as amended): “The Republic of

due to its wide content capacity, is at the same time a source of reconstruction of detailed rules. One of them, resulting precisely from the principle of sustainable development, is the principle of the ecosystem approach. Therefore, since the principle of the ecosystem approach results from the legal principle of sustainable development, it should not raise any doubts that it should also be recognized as a legal principle.

The following provisions of Directive 2014/89/EU are the normative source of the last of the above-mentioned principles of maritime spatial planning, namely the principle of taking into account the interaction between land and sea: 1) Art. 1 sec. 2, in which it was assumed that the establishment and implementation by the Member States of maritime spatial planning, which is a means of achieving the objectives set out in Art. 5, takes place, *inter alia*, taking into account the interaction of land and sea; 2) art. 4 sec. 2, which shows that the Member States, when establishing and implementing maritime spatial planning, do so taking into account the interaction of land and sea; 3) art. 4 sec. 5, according to which: “When establishing maritime spatial planning, Member States shall take due account of the specificity of maritime regions and the relevant existing and future activities and uses of these areas, their impact on the environment and natural resources, as well as the interaction of land and the sea”; 4) art. 6 sec. 2, specifying the minimum requirements for maritime spatial planning, among which taking into account the interaction of land and sea in the first place. Also recitals 9, 16 and 18 of Directive 2014/89/EU indicate that the maritime spatial plan(s) resulting from the planning process should take account of the interaction between land and sea.

From the perspective of the legal orders of the European Union Member States, which are obliged to develop spatial development plans for maritime areas under their jurisdiction, the above-mentioned principles contained in Directive 2014/89/EU are not the only principles relating to the legal aspects of maritime spatial planning. For if the provisions of the plans were to be of a regulatory (normative) nature, as is the case, *inter alia*, in the case of spatial development plans for Polish maritime areas, then both

Poland guards the independence and inviolability of its territory, ensures the freedoms and rights of people and citizens, and the safety of citizens, protects the heritage national and ensures environmental protection, guided by the principle of sustainable development. “

these plans and the entire planning process should comply with the constitutional principles that apply to the entire domestic legal order. Moreover, national regulations concerning maritime spatial planning, in particular those of statutory rank, also usually contain norms-principles influencing the process of applying and interpreting other norms⁶.

3. Correlation of the principles of the ecosystem approach and taking into account the interaction between land and sea, and the particular importance of these principles in maritime spatial planning

Against the background of the above catalog of legal principles of maritime spatial planning, reconstructed on the basis of the provisions of Directive 2014/89 / EU, one should notice a special distinction that characterizes the principles of the ecosystem approach and taking into account the interactions between land and sea⁷ in relation to other principles that could be describe as “technical” rules”. Without diminishing this definition of the importance and prominence of the intentions of the EU legislator, which were the basis of these other principles, it should be admitted that the first of them - the principle of completeness and continuity of maritime planning, founded on praxeological premises, is to guarantee the validity of planning arrangements in all maritime areas under the jurisdiction of the Member States of the European Union. On the other hand, the principle of planning independence of the Member States should be seen as an obvious consequence of the treaty principle of granting⁸. On the other hand, the principle of cooperation in the planning process is an expression of the democratization of the decision-making process and the broad participation of interested parties in formulating solutions that will become legally binding for them in the future. At the same time, their aim is to guarantee reaching legally and socially significant decisions in a conciliatory manner.

⁶ cf.: Tomasz Bąkowski, *Planowanie i zagospodarowanie przestrzenne polskich obszarów morskich. Problematyka administracyjnoprawna* (Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego, 2018), 114–137.

⁷ The special importance of these principles is also emphasized by, inter alia, Dorota Pyć, “The Polish Legal Regime on Marine Spatial Plannig,” *Maritime Law*, vol. XXXIII (2017):108.

⁸ See art. 5 of the Treaty on European Union. Consolidated version *OJ C 326, 26.10.2012, 18–18*.

Therefore, renouncing any depreciation of the above-mentioned principles and the accompanying goals and values, it should be stated that the principles of the ecosystem approach and taking into account the interactions between land and sea, from the perspective of the assumptions of Directive 2014/89 / EU, which are echoed both in the recitals and in its essential content, deserve to be called the guiding principles of maritime spatial planning.

The first of them - the principle of the ecosystem approach determines the axiological conditions for achieving the main goals set out in Directive 2014/89 / EU, which are supporting sustainable development and growth in the maritime sector.

The second - the principle of taking into account the interactions between land and sea, and indicates a method of effectively achieving the above-mentioned goals using the ecosystem approach. Therefore, taking into account land-sea discharge should be seen as an objective imperative for the effectiveness of the ecosystem approach⁹, and hence also for the achievement of all the goals of marine spatial planning for which the ecosystem approach is the way to achieve them. This means, *inter alia*, that these two priority principles should specifically determine the work on plans and the very content of the plans. This, in turn, largely depends on national legislation, which should enable the implementation of these principles.

Referring in this matter to the regulations in force in the Polish legal order, it is necessary to point out certain solutions that may cause difficulties in implementing the above-mentioned principles, including in particular the principle of taking into account the interaction between land and sea. Well, as mentioned above, the basic foundations of the legal regulation of spatial planning and spatial development of land territories and sea areas are contained in two separate acts. Basic provisions relating to the planning and spatial development of land territories have been included in the Act on Spatial Planning and Development (hereinafter: “u.p.z.p.”), and the regulations on the principles, methods and procedure of maritime spatial planning in chapter 9 of chapter II of the Act on maritime areas of the Republic of Poland and maritime administration (hereinafter: “u.o.m.”). It

⁹ Also Maciej Nyka “The concept of ecosystem services in regulation of human activity on the sea,” *Prawo Morskie*, vol. XXXIII (2017): 98.

should be noted that the editorial distribution of maritime spatial planning regulations in the act regulating the issues of maritime areas (from the perspective of the subject of the study) does not raise any objections. On the other hand, justified doubts arise due to the fact that there is no clear link between the above-mentioned acts, e.g. in the form included in the u.o.m. references to the appropriate application of the provisions of the u.p.z.p. in matters not regulated in Chapter 9, section II of the u.o.m.. On the contrary, instead of using the reference mentioned above in Art. 4 sec. 1a of the u.p.z.p. it was clearly and categorically indicated that in relation to sea areas, the intended use of the land, the distribution of public-purpose investments and the manner of land development and planning conditions are determined on the basis of the provisions of the u.o.m. It is true that in Art. 37c u.o.m. it is mentioned that the maritime administration authorities cooperate with the local governments of provinces and seaside municipalities in order to ensure the coherence of this plan with the studies of the conditions and directions of spatial development of municipalities, local spatial development plans and spatial development plans of Voivodship. However, the formal and legal separation of both regulations, for example, excludes the possibility of harmonizing the statutory general principles, which are rudimentary for the correct interpretation of the regulations, and in the event of the so-called gaps in the law, they serve to fill them. This state of affairs negatively affects, above all, the legal regulation of maritime spatial planning, which is limited in terms of content.

In the absence of formal and legal communication between the regulation of land and sea spatial planning, the reasons for potential terminological doubts should also be sought. An example of this can be used in u.o.m. key term for maritime spatial planning, the concept of “public purpose investment”, which has not been explained in the provisions of the u.o.m., but has a statutory definition in the u.p.z.p. However, the provisions of u.o.m. do not refer to this definition. Appropriate application of the provisions of the u.p.z.p. for maritime spatial planning could successfully eliminate these and other problems in the application of the provisions on land and sea spatial planning, thus giving a wider normative scope for the implementation of the principle of taking into account the interaction between land and sea in spatial planning.

4. The ecosystem approach

In the 1930s, Tansley, in his publication on terminology related to the study of vegetation, noted that the determinants of habitat function constitute a system that can be viewed as the basic unit of the environment. He also recognized that ecosystems are constantly interacting and that they are also constantly changing¹⁰. In his concept of the ecosystem, he pointed to the interactions between biotic and abiotic elements taking place within the ecosystem¹¹. Already the first researchers using the concept of the ecosystem indicated the continuity of the ecosystem¹², at the same time pointing to the processes of energy and substance circulation constantly taking place within them.¹³ Modern research supports these early hypotheses that characterize ecosystems¹⁴. They indicate the fact that one of the basic functions of the ecosystem is the supply and transformation of energy and matter as part of basic biological, chemical and physical processes, such as photosynthesis, processes related to the nitrogen cycle, as well as nitrification and denitrification processes. The ecosystem itself is defined as a complex of organisms occurring together in a specific territory along with the abiotic environment associated with their occurrence, remaining in constant interaction with each other through the processes of energy circulation necessary to build biotic structures and cycles of matter being the subject of this circulation¹⁵.

The concept of ecosystem services is closely related to the concept of ecosystem. The circulation of energy and substances in the environment, as well as the very persistence of the ecosystem, observed by researchers involved in the analysis of the functioning of ecosystems, provides humans with specific benefits, which are called ecosystem services¹⁶. One of the first definitions of ecosystem services was formulated in 1997 by Constanza and

¹⁰ Arthur Tansley, "The Use and Abuse of Vegetation Concepts and Terms," *Ecology*, vol. 16, no. 3 (1935): 300.

¹¹ Arthur Tansley, "The Use and," 303.

¹² Kurt Jax, "Function," and "Functioning," in "Ecology: What does it Mean?," *Oikos*, vol. 111 (2005): 641.

¹³ Raymond Lindemann, "The trophic-dynamic aspect of ecology," *Ecology*, vol. 23 (1942):400.

¹⁴ John Blair, Scott Collins, Alan Knapp "Ecosystems as functional units in nature," *Natural Resources & Environment*, vol. 14, no. 3 (2000):150–155.

¹⁵ Ibidem.

¹⁶ Robert Costanza, Ralph d'Arge, Rudolf de Groot, Stephen Farber, Monica Grasso, Bruce Hannon, Karin Limburg, Shahid Naeem, Robert V. O'Neill, Jose Paruelo, Robert G. Raskin,

his team, stating that environmental goods and services consist of the flow of matter, energy and information from natural resources, which together with man-made goods and services contribute to building human well-being¹⁷. Under the concept of ecosystem services, Wilson understands the biosphere to provide matter, energy and information needed for the life of society¹⁸. In Poland, Mizgajski and Stępniewska, using the concept of ecosystem services to describe ecosystem services, define them as the entirety of benefits achieved by society from the metabolism of ecosystems¹⁹.

Poskrobko defines ecosystem services as *values, forces and natural processes, as well as the effects of their existence and functioning, providing non-material "values" necessary for the life and development of humanity and contributing to the course of economic production processes, but physically not participating in these processes*²⁰. He identifies two perspectives for the analysis of ecosystem services - biological-ecological and socio-economic²¹. The first one accepts the functioning of natural processes as ecosystem services, which provide a habitat of a quality that enables human life and development. The second perspective narrows the concept of ecosystem services to the phenomena and manifestations of the life of ecosystems important in the management process, such as pollination of plants or CO₂ sequestration by plants²².

Paul Sutton & Marjan van den Belt, "The Value of the World's Ecosystem Services and Natural Capital," *Nature*, vol. 387 (1997): 255.

¹⁷ Costanza, d'Arge, de Groot, Farber, Grasso, Hannon, Limburg, Naeem, O'Neill, Paruelo, Raskin, Sutton, van den Belt "The Value of the World's Ecosystem Services and Natural Capital," 256.

¹⁸ Edvard Wilson, *Przyszłość życia* (Poznań: Zysk i Spółka 2003), 140.

¹⁹ Andrzej Mizgajski, Małgorzata Stępniewska, "Koncepcja świadczeń ekosystemów a wdrażanie zrównoważonego rozwoju," in *Ekologiczne problemy zrównoważonego rozwoju*, ed. Dariusz Kielczewski, Borzena Dobrzańska (Białystok: Wydawnictwo Wyższej Szkoły Ekonomicznej w Białymstoku 2009), 12 et seq.

²⁰ Bazyli Poskrobko, "Usługi środowiska jako kategoria ekonomii zrównoważonego rozwoju," *Ekonomia i Środowisko*, no. 1(37) (2010): 20.

²¹ Poskrobko, "Usługi środowiska," 22.

²² Ibidem.

The ecosystem approach has not received a single, universal definition on the basis of international law²³, and the way of understanding this concept may depend on the regulatory context in which the concept is used, it is assumed that the ecosystem approach is based on three basic assumptions. The first is the need for a holistic approach to managing human activity in the environment²⁴. Secondly, this activity must be based on the best available knowledge of the components, structure and dynamics of ecosystems. Third, and finally, this activity must be carried out in a way that does not compromise the integrity and health of the ecosystem²⁵.

The first attempt to define the ecosystem approach was made for the purposes of the Convention on Biological Diversity. At the fifth meeting of the Conference of the Parties to the Convention on Biological Diversity in May 2000, it was agreed that the ecosystem approach is a strategy for the integrated management of land, water and living environmental resources that promotes the conservation and sustainable use of these resources²⁶.

For the purposes of analyzing the use of the ecosystem approach to protect the possibility of using ecosystem services, the definition of the International Council for the Exploration of the Sea seems to be more useful, which defines the concept of the ecosystem approach by referring to the possibility of using ecosystem services, stating that the ecosystem approach is a comprehensive, integrated management of human activity based on the best available scientific belief in ecosystems and their dynamics, undertaken to identify and act on impacts relevant to the health of ecosystems, thereby achieving the sustainable use of ecosystem goods and services and maintaining the integrity of ecosystems²⁷. The quality of ecosystem services

²³ Ronán Long, *Marine Resource Law*. (Dublin:Thompson 2007), 4–51; Ronán Long “Legal aspects of Ecosystem-Based Marine Management in Europe,” *Ocean Yearbook* 26 (2012): 417–484.

²⁴ Owen McIntyre “The Emergence of an “Ecosystem Approach” to the protection of International Watercourses under International Law,” *RECIEL* 13, vol. 1 (2004): 6 et seq.

²⁵ Arie Trouwborst, “The Precautionary Principle and the Ecosystem Approach in International Law: Differences, Similarities and Linkages,” *Review of European Community & International Environmental Law* 18, no. 1 (2008):29.

²⁶ Report of the fifth meeting of the Conference of Parties to the Convention on Biological Diversity 15–26 May 2000 Nairobi. UNEP/CBD/COP/5/23.

²⁷ Guidance and the Application of the Ecosystem Approach to Management of Human Activities in the European Marine Environment. ICES Cooperative Research Report no. 273, accessed November 10, 2022, <http://www.ices.dk/sites/pub/Publication%20>

therefore depends directly on the application of the ecosystem approach, and one of the goals of the ecosystem approach is to guarantee the availability of ecosystem services. According to the United Nations Department of Maritime Affairs and Law (DOALOS), the ecosystem approach means managing human activity based on the best understanding of ecological interactions and processes, so as to ensure that ecosystem structures and functions are preserved for the benefit of present and future generations²⁸.

5. Ecosystem approach in the system of Polish maritime spatial planning

The basic instrument of maritime spatial planning in Poland is the maritime spatial development plan. This document, prepared by the minister responsible for maritime economy together with the minister responsible for construction after consultation with other ministers, is of fundamental importance for the regulation of the use of sea space. It resolves on:

- 1) the intended use, including primary functions, of internal sea areas, territorial sea and the exclusive economic zone;
- 2) prohibitions or restrictions on the use of these areas, taking into account the requirements of nature protection;
- 3) deployment of public purpose investments;
- 4) directions of development of transport and technical infrastructure;
- 5) areas and conditions of:
 - a) protection of the environment and cultural heritage,
 - b) practicing fishery and aquaculture,
 - c) obtaining renewable energy,
 - d) exploration, recognition of mineral deposits and extraction of minerals from deposits²⁹.

Reports/Cooperative%20Research%20Report%20(CRR)/crr273/crr273.pdf (18.10.2022); see also Wojciech Radecki, *Podstawy teoretyczne zintegrowanej ochrony prawnej środowiska* (Wrocław: Biuro Doradztwa Ekonomicznego Sp. Z o.o. 2010), 105.

²⁸ DOALOS *Developing and Implementing an Ecosystem Approach to Ocean-related Activities*. New York 2008, accessed November 10, 2022, http://www.un.org/depts/los/ecosystem_approaches/ecosystem_approaches.htm.

²⁹ Art. 37a sec. 2 of the Act on maritime areas of the Republic of Poland. Pyć “The Polish legal regime on marine spatial planning,” 114.

The plan preparation process is carried out by territorially competent directors of maritime offices³⁰. From the point of view of operating in sea areas, it is extremely important that the draft plan is prepared using a relatively new approach in Polish law, namely the ecosystem approach³¹. According to the definition contained in the act, it means that the following conditions will be met jointly in the management of human activity:

- 1) the impact on the ecosystem of the planned human activities will be maintained at a level that enables the achievement and maintenance of a good ecological state of the environment;
- 2) both the ability for the proper functioning of the ecosystem and resistance to environmental changes caused by human activity will be preserved;
- 3) the simultaneous, sustainable and sustainable use of ecosystem resources and services by present and future generations will be possible.

Thus, the proper functioning of ecosystems, their resilience and good ecological status of the marine environment become the key factors influencing the planning process in the framework of maritime spatial planning. Functions are assigned to various bodies of water. Pursuant to the Act, each body of water may be assigned only one basic function and theoretically any number of permissible functions. Permissible site functions mean possible uses of the site, the coexistence of which will not adversely affect the sustainable development of the site. The condition is, however, that the permissible functions must not interfere with the implementation of the basic functions. The location of the mining plant will therefore be within the primary purpose areas. Exploration, recognition of mineral deposits and extraction of minerals from deposits³², or, less likely, such designation will result from permissible functions. It is also impossible to remember about the conditions of the protection of the marine environment. In this regard, from the content of Art. 37b of the Act on Sea Areas gives a clear

³⁰ Art. 37b of the Act on the maritime areas of the Republic of Poland

³¹ Nyka "The concept of ecosystem," 101.

³² Annex 2 to the Regulation of the Minister of Maritime Economy and Inland Navigation and the Minister of Infrastructure and Construction of May 17, 2017 on the required scope of spatial development plans for internal sea waters, territorial sea and the exclusive economic zone of May 26, 2017, item 1025.

preference to the requirements of environmental protection in determining the functions of water bodies.

6. The objectives of the management of transitional and coastal waters from the perspective of land-sea interactions

6.1. Keeping the ecological balance

Maintaining the ecological balance is a concept to which the most important legal acts regulating the issues of the protection of the marine environment refer. This may be due to the fact that the restoration / maintenance of the ecological balance of the Baltic Sea, i.e. the homeostasis of the Baltic marine ecosystem, will mean the restoration of the Baltic's ability to self-regulate. The ability of ecological systems to self-regulate is important for several reasons. It consists of the balance in terms of the circulation of organic matter and energy in the ecosystem³³, sustainable use of energy from the reserves of the ecological system, maintaining the diversity and structure of the biocenosis, which controls and stabilizes the processes taking place in the biotope, durability of the ecosystem over time and, finally, the ability of the ecosystem to spontaneously restore balance in the event of the so-called environmental stresses. Such stresses, currently of an anthropogenic origin and resulting, inter alia, from the use of marine ecosystem services, do not pose a significant threat as long as their intensity or nature does not exceed the ecosystem's ability to self-regulate³⁴. No wonder then that preserving the ecological balance has become one of the central concepts in the international legal protection of the marine environment.

The United Nations Convention on the Law of the Sea, defining in art. 4 the concept of pollution does not do so by referring directly to ecological balance. However, it mentions the effects of pollution, which are, inter alia, harmful effects on living resources and marine life, threat to human life or health and impediments to the use of marine ecosystem services, including all permitted forms of water use, including leisure³⁵. Also, the definition

³³ Antoni Skowroński, "Utrzymanie dynamicznej równowagi ekosystemów Ziemi: (przyrodnicze i antropogeniczne mechanizmy)," *Studia Ecologiae et Bioethicae*, 2 (2004): 490.

³⁴ Arthur Tansley, *The Use and Abuse of Vegetation Concepts and Terms*, 303.

³⁵ United Nations Convention on the Law of the Sea of 10 December 1982.

of pollution included in the Helsinki Convention for the Protection of the Marine Environment of the Baltic Sea Area does not refer directly to the violation of the ecological balance, but describes the consequences of pollution in a descriptive manner, mentioning, among other things, the destruction of living resources and marine ecosystems and impediments to the use of marine ecosystem services³⁶. The Polish Water Law Act defines the pollution of sea waters in a similar way³⁷. Limiting pollution from land and sea sources is to restore the balance of the Baltic Sea ecosystem, including its biodiversity³⁸.

Ecological balance, after the changes introduced in 1992, has been recognized as one of the goals of the Helsinki Convention on the protection of the marine environment of the Baltic Sea area. The Convention mentions the will to maintain the ecological balance of the Baltic Sea both in the preamble, where it is mentioned as one of the objectives of the “ecological restoration” of the Baltic Sea, and in the further part of the Convention. In Article 3, the main objective of the obligations arising from the Convention is to promote the ecological restoration of the Baltic Sea area and to maintain its ecological balance³⁹. It is worth pointing out that the implementation of the Convention’s goals is undergoing some kind of evolution. Starting from protecting the environment against pollution from point sources, through increasing emphasis on the elimination of threats from diffuse sources, to efforts aimed at achieving ecological balance using the concepts of an ecosystem approach, adaptive management and ecosystem services⁴⁰ – concepts that try to balance the protection of the Baltic marine environment with the needs for the use of its resources by the multi-million

³⁶ Cf. art. 2 point 1 and art. 3 sec. 2 of the Helsinki Convention.

³⁷ Pt. 75.

³⁸ J. Ciechanowicz-McLean, *Międzynarodowe prawo ochrony środowiska* (Warszawa: Polskie Wydawnictwo Naukowe, 1999), 123.

³⁹ Art. 3 sec. 1. *The Contracting Parties shall individually or jointly take all appropriate legislative, administrative and other appropriate pollution prevention and elimination measures to promote the ecological restoration of the Baltic Sea Area and the maintenance of its ecological balance.*

⁴⁰ Hermann Becker, Joseph DiMento, Alexis Hickman, “Baltic Sea,” in *Environmental Governance of the Great Seas. Law and Effect*, ed. Joseph DiMento, Alexis Hickman (Cheltenham: Edward Elgar 2012), 40.

population directly subsisting on it and an even larger population living in its catchment area.

It is impossible not to notice that, both among the norms of European Union law and in contemporary documents adopted within the Helsinki Commission, references to ecological balance are becoming less frequent. This does not mean, however, that the concept has disappeared from the list of priorities for the protection of the marine environment in the Baltic Sea area. Ecological balance has become an element of the definition of good condition of the marine environment. This definition shows a comprehensive approach aimed at achieving the homeostasis of the marine environment. In particular, the issues of balance and stabilization of natural processes, which are relevant to the concept of homeostasis, come to the fore. References to the functioning of the Baltic Sea ecosystems modernize the objectives of the protection of the Baltic marine environment by linking them with the achievements of the Convention on Biological Diversity. This document, through references to the concept of ecosystem, introduces environmental protection onto a new track, giving conservation activities a broader perspective and enabling the implementation of new concepts in the protection of the Baltic marine environment, such as the recently gaining popularity concept of the ecosystem approach to the protection of the Baltic marine environment.

6.2. Correct (normal) functioning of the ecosystem

The proper (normal) functioning of marine ecosystems is one of the main objectives of the protection of the marine environment. It is identified both in the Marine Strategy Framework Directive⁴¹, and the Water Law Act⁴². From the point of view of the proper functioning of ecosystems, the Water Law assesses the good environmental condition of marine waters, stating that it is the condition of the marine waters environment, *in which marine waters are clean, healthy and fertile in relation to the prevailing conditions, while the use of the marine environment takes place at a sustainable level that*

⁴¹ Establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)

⁴² The Act of July 20, 2017, Water Law, Journal Of Laws of 2017, item 1566 as amended.

guarantees the possibility of human use and activity, the achievement of which is undertaken by activities based on an ecosystem approach and in which:

- a) the structure, functions and processes of the marine ecosystems that make up the sea, and the associated physiographic, geographic, geological and climatic factors, enable marine ecosystems to function properly and maintain resilience to human-induced environmental changes, and to protect species and habitats occurring in marine waters and prevents the disappearance of natural biodiversity as a result of human activity, and the balance of the functioning of various biological components is maintained,*
- b) hydromorphological, physical and chemical properties of marine ecosystems, including properties resulting from human activity in marine waters, enable the proper functioning of these ecosystems, substances and energy, including marine noise, discharged into the environment of marine waters as a result of human activities do not pollute marine waters.*
- c) substances and energy, including marine noise, released into the marine environment by human activities do not pollute marine waters;*

The Marine Strategy Framework Directive also uses the concept of normal ecosystem functioning to define the concept of good environmental status.

The criteria for assessing the good environmental status of marine waters are specified with the help of additional indicators (descriptors), appearing both under the Framework Directive⁴³, and under the Regulation to the Water Law Act⁴⁴. Eleven features were listed among the indicators of good environmental status. In addition, while not explicitly listed among the indicators, the doctrine also points to the need for a well-maintained marine environment to provide ecosystem services and other social benefits. Also, among the ecological goals mentioned in the Baltic Sea Action

⁴³ Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) L 164/19

⁴⁴ Regulation of the Minister of the Environment of 23 May 2016 on the adoption of a set of properties typical of a good environmental status of marine waters, Journal of Laws No. 2016 item 813

Plan (BSAP)⁴⁵ there are references to the proper functioning of ecosystems. In the BSAP biodiversity and nature protection segment, the ecological goal is to restore and maintain the condition of the seabed at a level that secures the functioning of ecosystems. In the same segment, the functioning of ecosystems is also a target and indicator for determining water quality. Protection of the integrity of the seabed at the level enabling the protection of the structure and functions of ecosystems is also mentioned as one of the measures to improve the condition of the marine environment and protect the sea shore in the Maritime Policy of the Republic of Poland until 2020 (with a perspective until 2030)⁴⁶.

Based on the definition of good status of the marine environment, it can be concluded that one of the basic features of properly functioning ecosystems is their productivity. The proper functioning of ecosystems is to enable the use of marine ecosystem services. This use, in turn, must be in keeping with the ecological balance, in a way that enables the use of ecosystem services for both modern and future generations. Functioning in Polish, EU and regional law relating to the protection of the marine environment, the principle of sustainable development has two basic elements. Firstly, integration, i.e. combining ecological, economic, social and political reasons, which constitute the holistic nature of sustainable development. Secondly, intra- and intergenerational justice - fairness in access to environmental services, but also in the division of burdens related to the protection of the marine environment⁴⁷.

⁴⁵ HELCOM Baltic Sea Action Plan accessed October 10, 2022, https://helcom.fi/media/documents/BSAP_Final.pdf.

⁴⁶ Inter-ministerial team for maritime policy of the Republic of Poland *Polityka morska Rzeczypospolitej Polskiej do roku 2020 (z perspektywą do 2030)*. Warszawa 2015, accessed November 10, 2022, https://balticcluster.pl/wp-content/uploads/2014/01/Polityka_morska-Uchwala_RM_33_2015-z-dnia-17-marca-2015.pdf.

⁴⁷ Janina Ciechanowicz-McLean and Maciej Nyka, "Podstawowe założenia środowiskowej gospodarki morskiej," *Prawo Morskie*, XXX (2014): 60.

6.3. Sustainable provision of ecosystem services

Environmental protection, including the marine environment of the Baltic Sea, is currently anthropocentric⁴⁸. This means that it takes place with the maximum consideration of the interests of the population, while recognizing that the proper functioning of ecosystems and maintaining the ecological balance is in the interest of humanity understood as an inter and intragenerative community. The undoubted practical interest of the population living in the Baltic Sea basin is access to the ecosystem services offered by this sea.

The circulation of energy and substances in the environment, as well as the very persistence of the ecosystem, observed by researchers involved in the analysis of the functioning of ecosystems, provides humans with specific benefits, which are called ecosystem services. There are many different definitions of ecosystem services in the doctrine. One of the first was formulated in 1997 by Constanza and his team, stating that environmental goods and services consist of the flow of matter, energy and information from natural resources, which together with man-made goods and services contribute to building his well-being⁴⁹. A little later, Wilson understood the concept of ecosystem services to provide the biosphere of matter, energy and information needed for the life of society⁵⁰.

Millennium Ecosystem Assessment - a study carried out at the request of the UN Secretary General Kofi Annan included in the Report of the UN Secretary General We the Peoples: The Role of the United Nations in the 21 Century defines ecosystem services as benefits that people achieve in connection with the functioning of ecosystems⁵¹. It emphasizes the role of ecosystems and ecosystem services, stating that man is fully dependent on ecosystems and the services that these ecosystems provide⁵². Similarly,

⁴⁸ Janina Ciechanowicz-McLean and Maciej Nyka, "Human Rights and Environment," *Przegląd Prawa Ochrony Środowiska*, vol. 3 (2012): 87.

⁴⁹ Costanza, d'Arge, de Groot, Farber, Grasso, Hannon, Limburg, Naeem, O'Neill, Paruelo, Raskin, Sutton, van den Belt "The Value of the World's Ecosystem Services and Natural Capital," 255–256.

⁵⁰ Edward Wilson, *Przyszłość życia* (Poznań: 2003), 140.

⁵¹ Millennium Ecosystem Assessment *Ecosystems and Human Well-Being. Synthesis. A Report of the Millennium Ecosystem Assessment* Washington 2005, p. v.

⁵² Ibidem, 49

the World Wildlife Fund states that humanity is completely dependent on the proper functioning of ecosystem supply services, many of which, if lost, could not be replaced by technological solutions⁵³.

Ecosystem services, being a very interesting subject of research, have received many different classifications. Among those identified by the Millennium Ecosystem Assessment, provisioning services; regulating services, supporting services, and cultural services⁵⁴ can be distinguished. Representatives of economic sciences present a slightly different division. For example, Kośmicki distinguishes raw material, production and transformation services, regulatory and utilization services, services for creating space for anthropogenic use, information services⁵⁵. Michałowski, in turn, identifies material environmental services, energy environmental services, information environmental services, spatial environmental services and stabilizing environmental services⁵⁶. In 2009, the European Environment Agency adopted the Common International Classification of Environmental Services. The extensive classification consists of five classification levels. It breaks down environmental services into 3 sections dividing services into delivery, regulatory and cultural services, respectively⁵⁷.

In 2003–2007, HELCOM carried out an analysis of the Baltic Sea ecosystems. It showed a significant negative impact of human marine activity

⁵³ World Wildlife Fund *Living Planet Report 2012: Biodiversity, biocapacity and better choices* (2012): 70, accessed October 18, 2022, <https://www.worldwildlife.org/publications/living-planet-report-2012-biodiversity-biocapacity-and-better-choices>.

⁵⁴ directly dependent on human perception and indicating environmental values that are not related to the direct acquisition of material goods, e.g. aesthetic landscape values, recreational values, resources of cultural and spiritual significance, didactic and scientific and cognitive values Paweł Sudra, "Usługi ekosystemowe na tle wybranych koncepcji ekologii miasta," *Człowiek i Środowisko*, vol. 39 no. 1 (2015): 66.

⁵⁵ Eugeniusz Kośmicki, "Zrównoważony rozwój w warunkach globalnych zagrożeń I integracji europejskiej," in *Ekologiczne problemy zrównoważonego rozwoju*, ed. Dariusz Kielczewski and Borżena Dobrzańska (Białystok: Wydawnictwo Wyższej Szkoły Ekonomicznej w Białymstoku, 2009), 12–16.

⁵⁶ Artur Michałowski, "Efektywność gospodarowania w świetle usług środowiska," *Optimum. Studia Ekonomiczne* 55, no. 1 (2012): 99–118, Artur Michałowski, „Usługi Środowiska w Badaniach Ekonomiczno-Ekologicznych,” *Ekonomia i Środowisko*, vol. 44, no. 1 (2013): 31–32.

⁵⁷ European Environment Agency *CICES. Towards a common classification of ecosystem services*, accessed October 20, 2022, <https://cices.eu/cices-structure/>.

on the ecosystems of the Baltic Sea⁵⁸. 24 types of ecosystem services provided by the Baltic Sea ecosystem have been identified. Only 10 types of services operate at levels that do not indicate a negative human impact on their availability. As many as 7 types of ecosystem services have been identified as highly endangered by human activity in a way that prevents the full use of the potential of these ecosystem services

7. An ecosystem approach to the management of transitional waters

Transitional waters, due to their geographic location, relatively easy access, and biological and morphological features, constitute extremely diverse ecosystems of major importance for the provision of ecosystem services. Their use is associated with the very beginning of human existence and goes back to the Paleolithic⁵⁹. Also today, ecosystem services of transitional waters constitute an important factor stimulating the development of the use of these areas.

In relation to Poland, but also many other countries of the Baltic and the world, the management of transitional waters is an additional challenge also due to the fact that often the jurisdiction over these waters is shared by different countries. This fact additionally emphasizes the role of inter-state cooperation in the field of this management, its legal instruments, but also the values and visions related to the use of these waters by various states.

Legal aspects of the management of transitional waters, constituting a continuum of freshwater, coastal waters and marine waters⁶⁰ arise from the legal norms regulating both the management of inland waters and marine waters. In both cases, the instruments used in this process refer functionally or directly to the concept of ecosystem services.

The International Council for the Exploration of the Sea defines the ecosystem approach by referring to the possibility of using ecosystem services, stating that the ecosystem approach is a comprehensive, integrated management of human activities based on the best available scientific

⁵⁸ HELCOM Ecosystem Health of the Baltic Sea 2003–2007 HELCOM Initial Holistic Assessment Baltic Sea Environment Proceedings No. 122 HELCOM 2010.

⁵⁹ Davide Tagliapietra, Ramunas Pavilanskas, Arturas Razinkovas-Baziukas and Julius Taminas, “Emerald Growth: A New Framework Concept for Managing Ecological Quality and Ecosystem Services of Transitional Waters,” *Water*, 12 (2020): 894.

⁶⁰ Art. 2 point 6 of the Water Framework Directive.

knowledge about ecosystems and their dynamics, undertaken to identify and act on impacts health-relevant ecosystems, thereby achieving the sustainable use of ecosystem goods and services and maintaining the integrity of ecosystems⁶¹. The quality of ecosystem services therefore depends directly on the application of the ecosystem approach, and one of the goals of the ecosystem approach is to guarantee the availability of ecosystem services. According to the United Nations Department of Maritime Affairs and Law (DOALOS), the ecosystem approach means managing human activity based on the best understanding of ecological interactions and processes, so as to ensure that ecosystem structures and functions are preserved for the benefit of present and future generations⁶².

For over a decade, the ecosystem approach has become the leading approach in the protection of the marine environment of the Baltic Sea. It derives from international law and its implementation of this approach in the protection of the Baltic Sea began when HELCOM - the Helsinki Commission decided to abandon the existing sectoral approach to the protection of the Baltic Sea environment in favor of a more holistic approach that addresses the subject of protection of the sea as a comprehensive ecosystem. The ecosystem approach adopted for the protection of the marine environment of the Baltic Sea is to protect, by means of preventive measures (and even a precautionary approach), against pollution harmful to the “permitted use of the sea”, which in fact boils down to using the ecosystem services of this reservoir.

In 2007, the Baltic Sea Action Plan was adopted in Krakow. It is recognized in the doctrine as the first attempt to incorporate the ecosystem approach to the protection of the marine environment by the Regional Sea Convention. This specific innovation corresponds to the ambitious goal set by the regimes regulating the protection of the Baltic marine environment

⁶¹ Guidance and the Application of the Ecosystem Approach to Management of Human Activities in the European Marine Environment, ICES Cooperative Research Report No. 273, accessed November 10, 2022, [http://www.ices.dk/sites/pub/Publication%20Reports/Cooperative%20Research%20Report%20\(CRR\)/crr273/crr273.pdf](http://www.ices.dk/sites/pub/Publication%20Reports/Cooperative%20Research%20Report%20(CRR)/crr273/crr273.pdf) (dostęp: 18.10.2022 r.); see also Radecki, “Podstawy teoretyczne zintegrowanej ochrony prawnej Środowiska,” 105.

⁶² DOALOS, *Developing and Implementing an Ecosystem Approach to Ocean-related Activities*, New York 2008, accessed October 18, 2022, http://www.un.org/depts/los/ecosystem_approaches/ecosystem_approaches.htm.

by the Baltic Sea Action Plan, i.e. the goal of treating the Baltic Sea as a specific example in the area of marine environment regulation. The application of the ecosystem approach, the aim and effect of which is to be the sustainable use of ecosystem goods and services, is expected to result in the achievement of a good state of the Baltic marine environment by 2021.

In the law of the European Union, the application of the ecosystem approach has become an obvious consequence of the principle of integration mentioned in Art. 11 TFEU. The significant development of instruments applying the ecosystem approach took place at the beginning of the 21 century with the growing awareness of the need to include the instruments of integrated management in the framework of marine resource management into the regulatory practice. The European Union has decided to implement the ecosystem approach to the protection of the marine environment through a system of regional sea conventions, including the above-mentioned Helsinki Convention. The emphasis on maintaining the availability of ecosystem services is also placed in the Framework Directive on the Marine Strategy, as well as in EU standards regulating marine spatial planning.

In Polish law, the availability of ecosystem services is directly a criterion for assessing the good environmental status of marine waters⁶³. Supportive services are indirectly a criterion for assessing the good ecological status of transitional and coastal waters⁶⁴. Thus, it can be concluded that the availability of individual categories of ecosystem services translates, from a formal and functional point of view, into the achievement of the objectives of water management, including transitional waters.

8. Conclusions

Land-sea interactions are gaining attention in situation of growing competition for sea space induced by the rise and changes in characteristics of sea uses. Problems of competition for space which on land has been solved by various forms of spatial planning now require adaptive usage of tools known

⁶³ Art. 16 (13) of the Water Law.

⁶⁴ Art. 16, point 9 of the Water Law; Annex I to the ordinance of the minister of maritime economy and inland navigation of October 11, 2019, on the classification of ecological status, ecological potential and chemical status and the method of classification of the state of surface water bodies, as well as environmental quality standards for priority substances.

from land space management. Implementation of planning procedures on the sea makes processes of issuing individual decisions more transparent and allows for better implementation of EU's economic freedoms.

From all the principles of maritime spatial planning principle of ecosystem approach together with principle of taking into account the interactions between land and the sea seems to take specific place as axiological foundations of maritime spatial planning. They might be called guiding principles of the MSP. First of them stresses the need of supporting sustainable development and growth of maritime sector. Second shows permanent and multifaceted interactions between maritime and land areas including in the sphere of nature or, more broadly, the environment, which underlie the concept of integrated maritime spatial planning. Taking into account the interactions between land and the sea principle, should be seen as an objective imperative for the effectiveness of ecosystem approach.

In Polish legal system the basic foundations of the legal regulation of spatial planning and spatial development of land territories and sea areas are contained in two separate acts. Basic provisions relating to the planning and spatial development of land territories have been included in the u.p.z.p., and the regulations on the principles, methods and procedure of maritime spatial planning in chapter 9 of chapter II of the u.o.m.. Potential confusion has been solved by direct referring to u.o.m in relation to spatial planning of maritime areas in the u.p.z.p. Apart from that the only systemic link between procedures of planning on land and sea are through vague obligation of cooperation between maritime administration and local government in executing their spatial planning competences.

The fact that Polish law seems not to identify the linkages and interaction between land and sea does not mean that such interactions do not exist. They are easily seen in the objectives of management of transitional and coastal waters – so the waterparts which are most important from the perspective of provision of ecosystem services which are consumed on land. Among those objectives one can indicate: keeping ecological balance in the ecosystems; ensuring normal functioning of the ecosystem and ensuring sustainable provision of ecosystem services.

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