

Experience in ensuring the competitiveness of coastal regions in the European Union and all over the world

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Abstract: The article discusses the experience of ensuring the competitiveness of coastal regions in the EU and in the world. It has been established that socio-economic processes in coastal regions play a key role in ensuring their competitiveness on a global scale. The research is based on the description of experience according to the structural elements of competitiveness - "territory", "people", "business processes", "administration".

EU initiatives address key priorities for enhancing regional capacity for innovation, competitiveness, sustainable jobs, conditions that create growth for institutional, financial and regulatory support for regions, and Smart specialization strategies for regions aimed at increasing added value, building on regional competitive advantages and developing interregional cooperation.

Considering the world experience of management of the maritime sector, it is necessary to note the effectiveness of the use of incentives. Among them there can be found economic (fisheries and aquaculture, biotechnology and marine shelf research), recreational, energy and shipbuilding, logistics, educational, ecosystem and environmental activities.

1. It should be noted that the existence of a clear EU blue growth strategy, marine development strategies (subordinate to the EU regional development strategy) allow local and regional authorities to use existing tools to create highly skilled jobs and economic opportunities in the maritime sector (taking into account the specifics of each region). Noteworthy are the strategies of smart-specialization and high-tech sectors that require some education, skills and experience of specialists (biotechnology, research of the sea shelf with the help of robotics, etc.) 2. The functioning of maritime clusters is an example of an effective way to integrate maritime and related industries, promote international trade, increase the region's added value, increase employment in the region, improve staff skills, develop and improve technology. 3. The growth of value added in the maritime sector depends on the level of development of regional infrastructure and related sectors. A clear example of the creation of a regional ecosystem in the region is the Oslo Maritime Region, which, through the use of three principles - infrastructure, digitalization and science - has become one of the EU's leading regions in terms of added value in the economy.

Key words: competitiveness, coastal regions, maritime sector, regional infrastructure

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Introduction

Problems of development of coastal areas and areas washed by ocean waters are in the field of view of scientists from around the world. The protection, conservation and development of the ecosystem of rivers, seas, oceans and similar areas on all continents of the globe is an important task of many global and regional organizations, including: Intergovernmental Oceanographic Commission, International Maritime Organization Global Ocean Forum, ULI Americas, European program INTERREG, The National Coastal Zone Management Program in the United States, The Canadian International Development Agency, Greenpeace, International Union for Conservation of Nature.

Creating a favorable economic and social environment in coastal regions for infrastructure development, foreign investment, increasing employment, reducing migration, simplifying logistics and commerce, developing education and culture creates the preconditions for the regions to function as "living laboratories for testing new economic, medical, educational and environmental solutions" [Mikhaylov, 2019]. Effective management of the coastal region through the use of local and national policy instruments in order to stimulate innovation and their dissemination adapts the flexible economies of the coastal regions to integration with the global requirements of market systems.

Theoretical premises

The need to develop a common vision for the sustainable use of the resources of coastal regions based on the ecosystem approach in order to increase their competitiveness requires studying the experience of the EU countries and the whole world.

The purpose of the article is to generalize and systematize world's experience, in particular, the experience of EU countries, which will allow other countries that have access to the seas and oceans to form their own strategies for the development of coastal regions, taking into account the current trends of developed countries. It is also necessary to outline the possibility of solving global world problems through an ecosystem approach to the use of resources that are available to coastal regions. It is these resources that form the preconditions for increasing the competitiveness of these regions.

The work of scientists from all over the world is devoted to the study of the features of the economy of coastal regions. G. Pontecorvo [Pontecorvo, 1989] claims the significant

contribution of the ocean sector to the US economy. Despite the fact that the publication dates back to the end of the last century, the close attention of the world community to the use of the resources of the seas and oceans began only from the beginning of the 21st century. Hance D. Smith [Smith, 2001] even claims the so-called "industrialization" of the world's oceans.

The study of the role of the maritime sector in the development of the economy allows you to develop strategies to increase both regional and national competitiveness [Morrissey, 2012].

Robert Costanza [Costanza, 1999] raises questions about the importance of the world's oceans and seas, and about limiting the use of their resources, using an ecosystem approach to sustainable development.

Methodology

The research methodology is based on the collection and processing of information by a descriptive method. The study of the need for the creation of marine protected areas required the use of deduction and induction methods. The study of the experience of using the tools to achieve the competitiveness of coastal regions was carried out using analysis and synthesis.

Results

Foreign experience in ensuring the competitiveness of coastal regions is systematized by the above components of competitiveness.

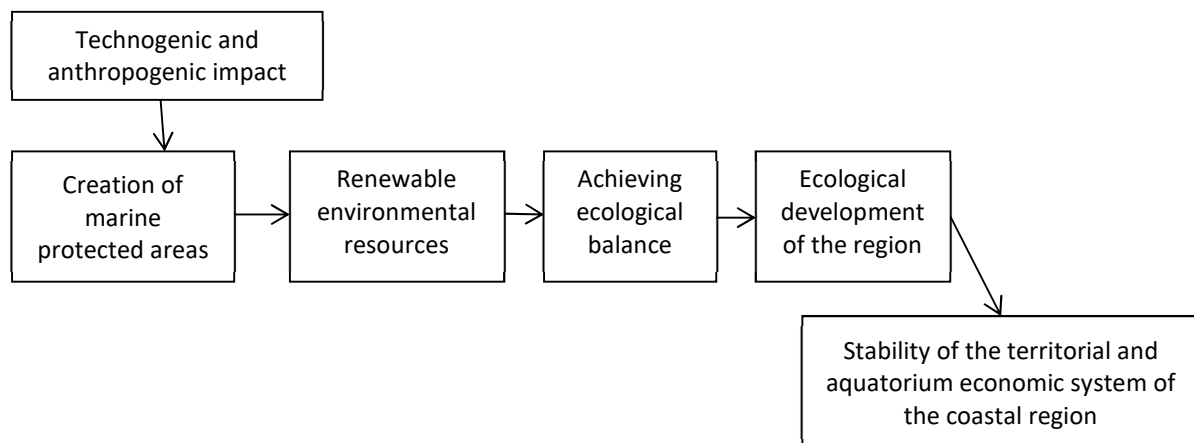
Marine Protected Areas (MARs) are a global conservation and management tool to increase the resilience of interconnected socio-ecological systems in order to conserve biodiversity and provide ecosystem services for sustainable use.

As the number of marine protected areas in the world grows rapidly, from 5% in 2005 to 10% in 2016 of the world's total water resources, there is an equal need to increase efforts and provide incentives for their effective management in order to conserve biodiversity with their help [Costello, Ballantine, 2015]. To this end, The IUCN Green List of Protected and Conserved Areas (GLPCA) has been established, a voluntary global standard according to which protected areas and their institutions can undertake to act in this direction and

cooperate with international organizations [Wells, Addison, Bueno, Costantini, Fontaine, Germain, Lefebvre, Morgan, Staub, Wang, White, Zorrilla, 2016].

Ecological management and conservation of marine wildlife populations is one of the most important tasks of coastal regions management. [Giménez, Louis, Barón, Ramírez, Verborgh, Gauffier, Esteban, Eljarrat, Barceló, Forero, Stephanis, 2017]. Recent research demonstrates the critical and ongoing need to build the capacity of marine reserves to protect coastal and marine ecosystems. The development needs of coastal areas depend on the location of the territory, understanding the consequences and determining appropriate approaches to management and construction of system-wide monitoring and evaluation programs. Schematically, the causes and results of environmental activities are shown in Figure 1.

Figure 1. The need to create marine protected areas



Source: own work

In order to ensure the competitiveness of human resources, the Singapore Maritime Cluster Fund, established by the Maritime and Port Authority of Singapore, promotes the growth of maritime cluster networks in Singapore by supporting employment, business development and productivity of the Singapore economy.

The development and improvement of the labor skills of the Singapore Maritime Cluster workforce has been identified as one of the key initiatives for state support for the cluster by the Maritime Cluster Foundation. The program consists of the following initiatives [Maritime cluster fund]: trainings (the goal is to improve the knowledge and experience of local maritime personnel by attending training programs approved by the

Maritime Cluster Fund); encouraging companies to invest in skills and experience; encouraging maritime and industry associations to adopt a structured human and training infrastructure, tools and processes to attract, train and develop staff talent.

The European Commission is implementing a strategy to increase employment in the coastal and maritime tourism sector. In Europe, the tourism sector employs more than 3.2 million people and generates a total of € 183 billion in gross value added and accounts for more than a third of the EU's maritime economy. For example, 51% of hotel rooms across Europe are concentrated in regions with a sea border. The scientific potential of Oslo, represented by a university connecting the University of Oslo, the Oslo Science Park, the University Hospital of Oslo, the SINTEF Research Institute and surrounding areas, was opened in August 2020. It is the second place in terms of GDP per capita in Europe, which makes Norway an extremely productive country.

The regional competitiveness of the EU's coastal economic systems and processes is confirmed by the maritime technology sector's turnover of € 91 billion, which directly provides more than 500,000 jobs, most of which require highly skilled workers. The EU maritime technology sector creates at least as many additional jobs and contributes significantly to regional development (200 regions in 18 EU countries). [Blueprint For Sectoral Cooperation on Skills. Maritime Technologies, 2017, P. 12]

Coastal regions have their own specifics of directly related to the ocean industries. Many economic activities, such as maritime transport, oil and natural gas production, fisheries, tourism, seabed resource development, port activities and renewable energy are directly dependent on the state of the seas. The stability of the marine environment is the main prerequisite for the success and competitiveness of these industries. In turn, on these sectors of the economy depends development of other sectors that provide the very possibility of conducting sea-related economic activities [Fedorov, G., Mikhailov, A., Kuznetsova, T., P. 7-27]. An interesting interpretation of the international practice of coastal zone management is presented in the work of S. Fadeev, where the coastal zone is defined as a special hierarchical economic and geographical object [Makhnovsky, D., 2014. P. 50-66].

Since 90% of international trade is through seaports [Mikhaylov, A, 2019. P. 29-42], then on a global scale, the infrastructure tends to the coast.

The emergence of new centers of economic growth, which complement and often replace old industrial centers, provides researchers with new evidence of the paramount importance of new factors of economic growth: R&D potential, human capital, intersectoral clusters and their consequences, institutional conditions that stimulate long-term high-risk investment and high-tech startups as the basis of the knowledge economy [Mikhaylov, A., 2019. P. 29-42]. A striking example is Smart City Iskandar in Malaysia, whose state program provides for a 3-fold increase in GDP by 2025, a reduction in unemployment by more than 2 times - from 4% to 1.8% through the use of smart technologies economy, environment, infrastructure, public administration, social sphere. The concentration of innovative resources creates the necessary conditions for the development of high-tech industries.

Smart technologies allow to make profits from coastal and marine areas, as well as attract investment and human resources to these areas. On the other hand, they contribute to increasing the pressure on the environment [Makhnovsky, D., 2014.,P. 50-66].

Encouraging high-tech companies to locate their business near ports is an internationally recognized strategy for creating innovative port city systems such as Montreal (Canada) and Rotterdam (Netherlands) [Witte,P., Slack,B., Keesman,M., Jugie, J.-H., Wiegman,B., 2018. P. 224 – 234].

Of particular interest are studies of regional features of economic activity of coastal regions of the EU, as current trends in economic development of coastal regions have certain similarities in the system of their development [Makhnovsky, D., 2014, P. 50-66]. Coastal regions have favorable conditions for the development of an innovative smart sector. Examples of successful forms of spatial networks are given by Mikhailov A. [Makhnovsky, D., 2014, P. 50-66]: “innovation clusters, science parks, research and technology innovation centers, as well as others, most of which, however, do not concern the maritime sector. These are Silicon Valley (USA), Mediterranean Valley (Denmark - Sweden), Bayan Lepas Free Industrial Zone (Malaysia), Zhongguancun Technology Center (China), Guro Digital Industrial Complex (South Korea) and Otaniemi Science Park (Finland)”.

The functioning of maritime clusters in Europe is primarily related to shipbuilding and shipping (Maritime cluster in Finland, Norway, Northern Germany). Examples of successful maritime clusters are the Dubai and Singapore clusters. The Dubai Maritime Cluster currently accounts for 7%, equivalent to AED 26.9 billion (\$ 7.32 billion) in 2020 [Dubai signs maritime cluster]. International cooperation in the maritime sector of the Emirate's economy, while

ensuring the global competitiveness of the cluster, is recognized as a priority area of investment attraction. The Dubai Maritime Cluster Bureau is responsible for monitoring the effectiveness of achieving goals, current and new challenges, and creating tools to address business challenges. It also "deploys a number of programs and initiatives aimed at modernizing maritime and logistics services, in addition to updating legislation, regulation and infrastructure and improving operational processes to the highest standards of excellence, quality, innovation and safety at sea" [Dubai signs maritime cluster]. The maritime cluster also includes the Maritime Advisory Council, Dubai Marine Exploration, Dubai Maritime Club, Dubai Maritime Week, Dubai Maritime Summit, Dubai Maritime Program, Dubai Maritime Training Center and Maritime Creativity Laboratory. The UAE's policy is to take a leading position among maritime powers in terms of international traffic and maritime trade, and to innovate in the maritime sector. The result was cooperation with the Panamanian Maritime Cluster.

The administration and management of coastal regions in the EU confirms that at all three levels: national, regional and local - competitiveness has been identified as the main task of its activities. Thus, competitiveness is an important criterion for assessments of developed economies made by international institutions [Cambridge Econometrics, 2003].

The Flash Eurobarometer, which focused on citizens' awareness and perception of EU regional policy, shows that the vast majority of Europeans (81%) believe that EU-funded projects have a positive impact on their lives; among the surveyed 40% of respondents know about such projects in more detail.

Member States and regions have developed more than 120 Smart Specialization strategies through the use of partnership and multilevel governance, setting priorities for research and innovation investment. During 2014-2020, more than € 40 billion (and more than € 65 billion including national co-financing) was allocated to the regions through the European Regional Development Fund to finance these projects [European Commission, 11 p.].

The institutions of regional support in the EU are [European Commission, 11 p.]: Structural Reform Support Service, Smart Specialization Platform, European Cluster Policy Forum, European Regional Development Fund, European Institute of Innovation and Technology, European Commission and World Bank, European Fund for Strategic Investments, European Parliament and Council. EU special institutions dealing with the problems of coastal

regions operate in accordance with the principles and key strategies of international and regional organizations, stakeholders (Table 1).

Table 1. Institutes of coastal management in the EU

EU institutions dealing with the problems of coastal regions	International and regional organizations	Stakeholders
<ul style="list-style-type: none"> • European Parliament • European Economic and Social Committee • Committee of the Regions • European Maritime Safety Agency • European Environment Agency • European External Action Service • European Defense Agency: Maritime Surveillance • EU NAVFOR: EU military operation to combat piracy off the Somali coast 	<ul style="list-style-type: none"> • UNESCO Intergovernmental Oceanographic Commission • Regional Fisheries Management Organizations (RROs) • Advisory Boards) 	<ul style="list-style-type: none"> • Conference of Peripheral Marine Regions (CPMR) • European Science Foundation (ESF) • Maritime Council • Atlantic Arc Cities Conference • IMARES - Research Institute of Marine Ecology • Deltares Research Institute • ICES - International Council for the Study of the Sea

Source: based on (http://www.ec.europa.eu/maritimeaffairs/links_en).

The classic tool of regional governance is the Stairs to Perfection pilot project, which helps to bridge the innovation gap between EU regions by supporting the implementation of Smart Specialization strategies, developing and using complementarities between cohesion policy, Horizon 2020 and other EU funding programs.

The EU regional government has its own functions, in particular, its powers are legislative, executive and administrative. The regional government cannot issue laws, decrees but prepares regional bills for approval by the Regional Council. With regard to executive powers, the Regional Government has all executive powers over the laws and decisions of the Regional Council. The administrative powers of the Government of the EU region are to prepare regional budgets for the year in accordance with the prepared programs and development plans of the regions (which are prepared by it), balance sheet and financial statements.

Negotiations are currently underway with the European Parliament and Member States on the formation of the next EU budget for the period 2021-2027 and on the priorities of future regional policy, which will allow more efficient use of EU investment on the ground.

The ecosystem approach to increasing the competitiveness of coastal regions is based on the use of natural resources in order to reduce the threats posed by economic activity, preserve and increase land, water and living resources, flora and fauna in general (Table 2).

Table 2 Threats and means of preserving the ecosystems of coastal regions

Threats to the region's ecosystem	Means of ecosystem conservation
<ul style="list-style-type: none"> • intensive use of insecticides and herbicides; • construction of country plots on lands unsuitable for agriculture; • excessive grazing; • annual burning of dry vegetation in steppe beams, forest belts, river floodplains; • development of hydropower; • water reduction and siltation of rivers; • increase of recreational load on the territory of special nature protection significance; • poaching, disturbing animals in the quiet season; • littering of territories; • felling of field protection strips; • development of new mineral deposits; • overgrazing of cattle in areas with natural vegetation, etc.; • air emissions; • surface and groundwater pollution; • soil and air erosion; • flooding of territories; • distribution of agrolandscapes; • uneven development of the territory, etc. 	<ul style="list-style-type: none"> • support of natural processes of formation of structure and structure of groups, their preservation and reproduction; preservation, reproduction; • inexhaustible use of natural ecosystems; • prevention of anthropogenic degradation of natural ecosystems; • preservation and restoration of natural and cultural complexes; • control and monitoring of the use of territories and water areas within the allowable ecological load; • introduction of environmental impact assessment systems; • components of conservation or restoration of the number and habitats of natural populations of species of plants, fungi and animals, including those listed in the Red Book of Ukraine and international lists of rare and endangered species; • maintenance of the natural state of populations; • prevention of the spread of diseases, pests and parasites among species of natural flora and fauna; • streamlining of economic and recreational activities within the territories and objects of the nature reserve fund; • formation and monitoring of the ecological network; • installation of water protection zones and coastal protection strips of water bodies;

Source: based on (http://www.ec.europa.eu/maritimeaffairs/links_en).

It should be noted that the peculiarity of the competitiveness of coastal regions is to take into account the specifics of indicators of socio-economic development of coastal regions, which are in the following areas:

- ecosystem approach to the protection, preservation and reproduction of the productive forces of the region;
- systematic approach to the development of the maritime complex of industries, recreation and tourism, overcoming seasonality;

- management of human resources in the region (creation of conditions for education, development and improvement of skills, capacity building) in order to purposefully ensure the favorable development of socio-economic processes in the region;
- ensuring the solution of problems of development of coastal regions at the level of region, communities, branches, enterprises.

Summary, recommendations

The development of programs for the competitiveness of coastal areas can directly contribute to increasing the level of innovative development of the region, supporting the effective management of ecosystems and improving the coordinated management of social institutions. However, the main thing for this program is to build on the principles of community trust in order to create a locally appropriate format for the prosperity of the region.

Important elements of maintaining the competitiveness of coastal regions through development programs are:

- comprehensive assessment of regional development needs;
- strong partnerships between regional government entities for the implementation of programs;
- clear goals and expected long-term results;
- strong and stable political will at the local, national and regional levels [Nelson, A., Johnson, G., Wenzel, L., Antoine, A., Ma, L., Manubag, L., 2019.].

R Hilborn [Hilborn, R., 2016, P. 224-226] notes that an example of effective coastal management is demonstrated by the United States, where there operate independent regional coastal management agencies, such as the California Coastal Commission.

Considering the world's experience of management of the maritime sector, it is necessary to note the effectiveness of the use of incentives. Among them there can be found economic (fisheries and aquaculture, biotechnology and marine shelf research), recreation, energy and shipbuilding, logistics, education, ecosystem and environmental protection activities. Table 3 lists activities systemized according to their type, as well as management decisions on their activation.

Table 3. Classification of world experience of managerial influences on the competitiveness
of coastal regions

Types of activities	Countries (groups of countries)	Incentive tools (management decisions to intensify activities)
Economic, including fishing and aquaculture	<ul style="list-style-type: none"> • Adriatic, • Mediterranean and Black Sea basin countries, • Norway, • USA 	<ul style="list-style-type: none"> • Introduction of ecological fish processing; • struggle with illegal fishing; • control and monitoring; • setting norms and restrictions.
Biotechnology and shelfseas research	<ul style="list-style-type: none"> • Countries of the Black and Baltic Seas, • UAE, • Panama, • USA. 	<ul style="list-style-type: none"> • Scientific cooperation of working and expert groups; • development of joint regional cross –border programs; • providing communication sector of the rural economy, trade, transport.
Tourist and recreational	<ul style="list-style-type: none"> • Countries of the Baltic, • Black, • Adriatic and Mediterranean seas. 	<ul style="list-style-type: none"> • Expanding demand for cruise tourism; • support for startups in tourism; • creation of development strategy; • training of specialists with skills in the tourism industry; • overcoming the off-season (on account of recovery of men of advanced age, holding conferences).
Industrial, including energy	<ul style="list-style-type: none"> • Baltic, • Black, • Adriatic and Mediterranean Seas, • Norway, • Denmark. 	<ul style="list-style-type: none"> • Reducing regulatory barriers to cross-border investment; • functioning of marine clusters; • ensuring the safety of activities; • production of energy from renewable sources.
Logistics (sea transport)	<ul style="list-style-type: none"> • Basin countries of the Baltic, • Black, • Adriatic Seas, • UAE , • Canada. 	<ul style="list-style-type: none"> • Ensuring the safety of activities; • clustering of port activities; • creating information systems for vessel traffic guarantee in spare security; • development of port terminals; increase of port capacity; development of highways due to transformation with road and rail connections.
Intellectual (science, education, innovation)	<ul style="list-style-type: none"> • Baltic Sea Basin Countries, • Norway, • UAE, • Panama, • Singapore, • Canada. 	<ul style="list-style-type: none"> • Establishment of a network of maritime academies; • state participation in stimulating the creation of innovation clusters; • special programs of study and projects qualifications and skills increasing of the personnel involved in the maritime industry.
Ecosystem-environmental	<ul style="list-style-type: none"> • Black, • Adriatic and Mediterranean Seas, • New Zealand, • Philippines, • Australia, • USA. 	<ul style="list-style-type: none"> • Development of environmental standards; • environmental control and monitoring; • exchange of countries world experience management; • implementation of maritime spatial planning; integrated coastal zone management; investing in water supply and treatment facilities; • solving the problems of sea and ocean garbage; • development of joint transboundary seas and ocean ecosystem management plans.

Source: own study.

Thus, summarizing the world experience of managing coastal regions, it is worth noting the global trends in this process.

1. It should be noted that the existence of a clear EU blue growth strategy, marine development strategies (subordinate to the EU regional development strategy) allow local and regional authorities to use existing tools to create highly skilled jobs and economic opportunities in the maritime sector (taking into account the specifics of each region). Noteworthy are the strategies of smart specialization and high-tech sectors that require some education, skills and experience of specialists (biotechnology, research of the sea shelf with the help of robotics, etc.).

2. The functioning of maritime clusters is an example of an effective way to integrate maritime and related industries, promote international trade, increase the added value of the region, increase employment in the region, improve staff skills, develop and improve technology.

3. The growth of value added in the maritime sector depends on the level of development of regional infrastructure and related sectors. A prime example of the region's regional ecosystem is the Oslo Maritime Region, which, through the use of three principles - infrastructure, digitalisation and science - has become one of the EU's leading regions in terms of added value in the economy.

4. Given the state of the marine ecosystem, measures to protect and safeguard marine protected areas are necessary and relevant throughout the world and contribute to the restoration of the potential of the seas and oceans.

5. The tourism industry is becoming one of the drivers for increasing the competitiveness of the coastal region through the use of natural, geographical, economic and social regional opportunities. Overcoming the off-season and promoting ecotourism is one of the key tasks of coastal development strategies

6. Functioning of special regional bodies, signing of regional conventions on development of coastal territories, creation of unions - a characteristic feature of strategies of development of coastal regions.

7. In order to improve administrative and institutional capacity, maritime services and better management, data exchange, joint planning and coordinated management of existing resources (e.g., maritime spatial planning and integrated coastal zone management) have been introduced.

Table 4. Experience of ensuring the competitiveness of coastal regions

Elements of competitiveness	World practices
Territory	<ul style="list-style-type: none"> • Proclamation at the world level of the need to preserve and protect maritime areas; • conservation measures for coastal areas and unique marine protected areas using biological monitoring of environmental components; • encouraging maritime enterprises and industry associations to preserve the ecosystem component of coastal regions.
People	<ul style="list-style-type: none"> • Creation of territorial coastal clusters in order to provide skills and experience to staff, structured personnel and training infrastructure; • use of innovative tools and processes to attract, train and develop staff talent and increase employment in the maritime sector; • financing the establishment of educational institutions in the region.
Business processes	<ul style="list-style-type: none"> • Encouraging maritime enterprises and industry associations to create high-tech jobs; • stimulating startups and long-term investments based on smart technologies; increasing the efficiency of innovation clusters; • modernization of logistics services, infrastructure, improvement of operational processes in accordance with the highest standards of excellence, quality, innovation.
Administration	<ul style="list-style-type: none"> • Institutes of coastal regions management are represented at all levels of government - international, national and regional; • updating legislation with current requirements for safety at sea.

Source: own elaboration

Thus, based on the above, it is wrong to understand the coastal regions as peripheries, as the coastal zone is a favorable geographical location for trade, use of marine resources (shipping, fishing, green energy, etc.). World and European coastal regions are ahead of inland regions (with closed borders, landlocked) in terms of the transition from low value-added activities to the introduction of industries of the fourth industrial type, greater involvement of independent innovation potential.

The development of infrastructure, new high-speed communications and transport, and smart and digital infrastructure gave the inland regions an additional advantage in competing with the coast. The competitiveness of coastal regions in the context of globalization requires effective methods of organization, for example, maritime corporations, coastal clusters, which would take into account the geographical, climatic and socio-economic conditions of the regions.

The analysis of foreign experience has established that the strategy of ensuring the competitiveness of coastal regions has been identified as key at all levels of government in the European Union, the relevant bodies have been established and management tools

have been used. The experience of organizing a cluster system in the UAE, Singapore and Norway is a modern example of the efficient use of resources of all elements of competitiveness (territory, people, processes, administration).

References

- Blueprint For Sectoral Cooperation on Skills. Maritime Technologies. Responding to skills mismatches at sectoral level. A key action of the New Skills (2017) Agenda for Europe Luxembourg: Publications Office of the European Union.
- Cambridge Econometrics. A Study on the Factors of Regional Competitiveness. A final report for The European Commission (2003) Directorate-General Regional Policy, University of Cambridge.
- Communication From The Commission To The European Parliament, (2017) The Council, The European Economic And Social Committee And The Committee of The Regions. Brussels. European Commission
- Costanza, R. (1999). The ecological, economic, and social importance of the oceans. *Ecological Economics*. Vol. 31(2)
- Costello, M., Ballantine, W. (2015) Biodiversity conservation should focus on no-take Marine Reserves. *Trends in Ecology & Evolution*. Vol. 30.
- Dubai signs maritime cluster. MoUs with Hamburg and Vancouver. Retrieved from: <https://www.seatrade-maritime.com/americas/dubai-signs-maritime-cluster-mous-hamburg-and-vancouver> Date of access: 28.10.2020). (In Ukr.)
- Fedorov, G, Mikhailov, A, Kuznetsova, T. Vliyanie morya na razvitie ekonomiki i rassedeniya stran Baltiyskogo regiona [The influence of the sea on the development of the economy and the settlement of the Baltic region]. *Baltiyskiy region [The Baltic region]*. № 2
- Giménez, J., Louis, M., Barón, E., Ramírez, F., Verborgh, P., Gauffier, P., Esteban, R., Eljarrat, E., Barceló, D., Forero, M., Stephanis, R. (2017) Towards the identification of ecological management units: A multidisciplinary approach for the effective management of bottlenose dolphins in the southern Iberian Peninsula. *Aquatic Conservation: Marine and Freshwater Ecosystems*. Vol 28. Retrieved from: <https://www.tourister.ru/publications/283> (Date of access: 28.10.2020). (In Ukr.)
- Hilborn, R. (2016) Marine biodiversity needs more than protection. *Nature*, № 535
- Justification of priorities of the competitiveness strengthening of Ukrainian regions in the European integration process. Socio-economic reforms of the national economy recovery: the experience of Ukraine (2018): Collective monograph. Bydgoszcz, Poland: University of Economy in Bydgoszcz, Publishing House.
- Links. Maritime Affairs. Retrieved from: https://ec.europa.eu/maritimeaffairs/links_eni Date of access: 28.10.2020). (In Ukr.)
- Makhnovsky, D. (2014) The coastal regions of Europe: economic development at the turn of the 20th century. *Baltic Region*. № 4.
- Maritime cluster fund. Retrieved from: <https://www.maritimesgconnect.com/learn/mcf/overview> Date of access: 28.10.2020). (In Ukr.)
- Mikhaylov, A. (2019) Coastal agglomerations and the transformation of national innovation spaces. *Baltic Region*. № 1.
- Morrissey, K., (2012) The Irish marine economy and regional development *Marine Policy* 36(2).
- Morrissey, K., (2013) The role of the marine sector in the Irish national economy: An input-output analysis. *Marine Policy* 37(1).

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- Nelson, A., Johnson, G., Wenzel, L., Antoine, A., Ma, L., Manubag, L. (2019) Integrating social network development into marine protected area management capacity building and institutionalization in the Philippines and Indonesia. *Aquatic Conservation: Marine and Freshwater Ecosystems*. Vol. 29
- Pontecorvo, G. (1989) Contribution of the ocean sector to the United States economy. *Marine Technology Society Journal*. Vol. 23(2)
- Smith, H (2001) The industrialisation of the world ocean. *Ocean & Coastal Management*. Vol 44 (9-10).
- Wells, S., Addison, P., Bueno, P., Costantini, M., Fontaine, A., Germain, L., Lefebvre, T., Morgan, L., Staub, F., Wang, B., White, A., Zorrilla M. (2016) Using the IUCN Green List of Protected and Conserved Areas to promote conservation impact through marine protected areas *Aquatic Conservation: Marine and Freshwater Ecosystems*. №. 26 (Suppl. 2).
- Witte, P., Slack B., Keesman M., Jugie J.-H., Wiegman B. (2018) Facilitating start-ups in port-city innovation ecosystems: A case study of Montreal and Rotterdam. *Journal of Transport Geography*. №. 71.