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THE DEVELOPMENT OF STATE SUPPORT OF CLUSTER PROCESSES IN UKRAINE'S MARITIME INDUSTRY

The article addresses issues of state support of cluster processes in the maritime economy of Ukraine. Theoretical foundations of cluster processes in the maritime economy sector are shown. It is proposed that the maritime economy cluster should be considered as a spatially organized systemic form of organization and management of subjects of different ownership forms and governmental institutions in the field of marine economy. Moreover, it is stressed that its purpose is to achieve and to maintain the competitiveness of the supporting areas by focusing on the formation of agglomeration economics and on obtaining synergistic effects from processes of getting efficiency from the use of strategic potentials of participants. The relevant areas of specialization of maritime economy clusters of the Southern region of Ukraine, which are of paramount importance for the state and are of major interest to domestic and foreign businesses are presented in the article. The main directions of state cluster policy are outlined.

The main obstacles in the implementation of the cluster approach are determined. Elements of the methodological implementation of the state cluster policy in Ukraine on the example of sea industrial complex of the region are systematized.

It is proved that the effective functioning of maritime economy clusters will ensure maximum synergy effect and will coordinate work towards the satisfaction of social needs, the coordination of regional and national economic interests to improve the competitiveness of Ukraine's economy. The model of state regulation of the development of maritime economy clusters in Ukraine is proposed. In addition, the institutional framework of management of the maritime economy as a complex, multicomponent managed system is proposed.

Keywords: *maritime industry cluster, maritime economy, government regulation, state support, state cluster policy.*

Gajdu O., Rozwój procesów wsparcia przez państwo procesów klastrowych w gospodarce morskiej Ukrainy

Artykuł analizuje procesy wspierania przez państwo klastrów w gospodarce morskiej Ukrainy. Przedstawiono w nim aktualne kierunki specjalizacji klastrów w

gospodarce morskiej w południowym regionie Ukrainy. Określono główne przeszkody w realizacji podejścia klastrowego. Usystematyzowano elementy zapewnienia realizacji państwowej polityki klastrowej na Ukrainie na przykładzie gospodarki morskiej regionu. Zaproponowano również model regulacji przez państwo rozwoju klastrów w tej sferze. Przybliżono podstawy instytucjonalne zarządzania gospodarką morską jako skomplikowany, wieloskładnikowy i kierowany system.

Słowa kluczowe: klastery w gospodarce morskiej, kompleks gospodarki morskiej, regulacja państwowa, wsparcie państwowe, państwowa polityka klastrowa

Гайду О.В. Розвиток державної підтримки кластерних процесів у морегосподарському комплексі України

В статті розглядаються питання державної підтримки кластерних процесів у морегосподарському комплексі України. Представлені актуальні напрями спеціалізації морегосподарських кластерів Південного регіону України. Визначено основні перешкоди у впровадженні кластерного підходу. Систематизовано елементи методологічного забезпечення реалізації державної кластерної політики в Україні на прикладі морегосподарського комплексу регіону. Запропонована модель державного регулювання розвитку морегосподарських кластерів в Україні. Представлена інституційна основа управління морегосподарським комплексом як складною, багатокomпонентною керованою системою.

Ключові слова: морегосподарський кластер, морегосподарський комплекс, державне регулювання, державна підтримка, державна кластерна політика.

Гайду А.В. Развитие государственной поддержки кластерных процессов в морехозяйственном комплексе Украины

В статье рассматриваются вопросы государственной поддержки кластерных процессов в морехозяйственном комплексе Украины. Представлены актуальные направления специализации морехозяйственных кластеров Южного региона Украины. Определены основные препятствия в реализации кластерного подхода. Систематизированы элементы методологического обеспечения реализации государственной кластерной политики в Украине на примере морехозяйственного комплекса региона. Предложенная модель государственного регулирования развития морехозяйственных кластеров в Украине. Представлена институциональная основа управления морехозяйственным комплектом как сложной, многокомпонентной управляемой системой.

Ключевые слова: морехозяйственный кластер, морехозяйственный комплекс, государственное регулирование, державна підтримка, державна кластерна політика.

Introduction

Since the last decade of the twentieth century, some scientists and government agencies of different countries have been paying a lot of attention to the issues of the cluster. International organizations such as the OECD, the UNIDO, the UNCTAD, the World Bank, and the European Commission actively use cluster strategy in formulating and implementing state policy of regional economic systems' development. This is done in order to accumulate strategic potential of subjects of different ownership forms and governmental institutions in the "points of growth" by regeneration of territorial – sectoral entities, optimization of their production costs, attraction of investments, and implementation of scientific research developments.

Preconditions for effective activity of any cluster are the presence of existing competitive enterprises in its composition, the establishment of mutually beneficial horizontal and vertical relationships between the participants, the orientation of investment resources in high-tech industries and appropriate government regulation. Such government regulation must be focused on formation of favorable environment for cluster performance, motivation to develop cooperation and, if needed, state support.

Analysis of recent research

Such foreign and Ukrainian scientists and practitioners as M. P. Voynarenko, A. V. Voronin, A. F. Gojko, B. M. Danylyshyn, V. D. Dzhabylo, V. I. Dubnytsky, V. I. Zakharchenko, O. I. Kovtun, P. R. Kruhman, N. V. Malyy, N. A. Mikula, E. S. Moiseenko, M. E. Porter, S. I. Sokolenko, A. M. Tugay, S. G. Fedorenko, V. I. Chuzhykova, A. T. Shyndina and others researched challenges of the origin and the development of clusters. However, additional studies of the definition of "sea industrial cluster" and conditions of its formation and functioning within the relevant policy of a state are needed.

Research goals

The goal of the article is to outline key components of the effective development of state support for clustering processes in maritime economy of Ukraine.

Results

The value of clusters and cluster policy for the Southern region of Ukraine (Zaporozhye, Kherson, and Mykolayiv regions), where marine economy complex is a potential growth factor of economic and social changes lies in their ability to provide knowledge-intensive innovative in nature character to the traditional resource mastering of the Black and the Azov seas and their coastal strip. The cluster policy should be also orientated on the development of multidisciplinary economy of the coastal areas, the modernization of transport, energy, communication, innovation infrastructure, and the implementation of

organizational and institutional innovations, the intensification of processes of increasing competitive advantages of marine economy activities.

From this point of view, maritime economy cluster should be considered as a spatially organized systemic form of organization and management of subjects of different ownership forms and governmental institutions in the field of marine economy. Its purpose is to achieve and to maintain the competitiveness of the supporting areas by focusing on the formation of agglomeration economics and on obtaining synergistic effects from processes of getting efficiency from the use of strategic potentials of participants.

Unfortunately, clustering processes are not yet well developed in Ukraine, as this requires appropriate institutional and regulatory environment as well as appropriate level of government support.

More ambitious and urgent action that will ensure the development of national integrated program of clusters creation should be taken by the state [4, p. 8]. It is important to ensure the conditions that would be based on an analysis of the strategic potential of the regions, on identifying the existing problems of their development and on the promotion of integration processes within certain areas. The development of effective support models of the spread of cluster structures will accelerate their formation [3, p. 325].

Actualization of the establishment of maritime economy clusters is connected with a certain change in economic priorities in the context of globalization changes. Members of the cluster get advantages, based on local institutional specificity (knowledge, motivation, relationships). Only local economic entities, as opposed to distant competitors possess this specific and are able to use it.

As previously indicated, we consider that the stronghold region of maritime economy clusters in Ukraine is the South region with a focus on the Odessa and Mykolayiv oblasts. For example, the Department of Transport and the Maritime Economy Complex started to function in the structure of the Odessa Regional State Administration in 2015. This Department, according to the Regulations on work, provides implementation of state policy in the sphere of transport, communications and sea industrial complex and coordinates the activities of transportation, sea industrial and aviation complexes, enterprises and institutions of communication. In addition, the Permanent Committee on Transport Issues, Communications and the Maritime Economy Complex entrusted with such functionality duty is established at the Odessa Regional Council with such goals as [2]:

- to promote the formation and the development of the market of transport and freight forwarding services, the implementation of total regional measures for the development of communication and information, the development of the sea industrial complex;

- preliminary consideration of programs of oblast and regional development (support) of transport, communications and sea industrial complex and further monitoring their implementation;
- participation in the preparation of proposals concerning accommodation of new enterprises in the region and the reconstruction, the expansion and the elimination of existing enterprises and objects in the transport, communications and sea industrial complex;
- participation in the development and implementation of measures aimed at effective cooperation of all transport modes;
- participation in the development of general plans of transportation development of the oblast, the consideration of important construction projects of transport infrastructure;
- review and submission of proposals for routes and schedules of movement of public transport, carrying passengers;
- preparation of proposals for concerted measures to ensure the smooth operation of transport in the event of natural disasters, accidents and during emergency response to them;
- interaction with the structures that monitor the compliance with safety of navigation, the protection of human life on the water, the regime measures in the border zone and controlled border areas according to the current legislation of Ukraine;
- promotion of the development of a system of basic education, training and retraining in the field of maritime economy in the educational establishments of the region;
- control over the implementation of regional targeted and comprehensive programs in the field of communications and information of the executive authorities and local governments within the regional budget of the Odessa region and other local budgets;
- development and organization of activities aimed at effective cooperation of all types of enterprises and institutions of communication and information;
- participation in the preparation of proposals concerning accommodation of new businesses as well as reconstruction, expansion, elimination of existing enterprises and objects in the field of communication and information in the region;
- participation in the development of general schemes for communications and information with the aim of infrastructure development proceeding from the interests of the state and the region;
- submission of proposals for the introduction of software and methodical functioning of information-analytical systems used for the study of economic and social development of the oblast;

- facilitation of effective operation and the development of objects of mail communication in the oblast, providing proposals and preliminary consideration of issues on implementation of the regional council's powers under Article 12 of the Law of Ukraine "On Postal Communication".

However, unfortunately, the issue of the state policy of cluster development of the maritime economy complex regions is not considered not only at the regional level, but also at the state level, where it does not find adequate support.

Still, the aforementioned governance institutions possessing information on regional characteristics and the structure of industrial production in the region should define the vector of socio-economic breakthrough and lay a momentum for the implementation of mega-projects related to sea business activities.

Figure 1 shows the actual areas of specialization of the maritime economy clusters in the Southern region of Ukraine, which are of paramount importance for the state and of major interest to domestic and foreign businesses.

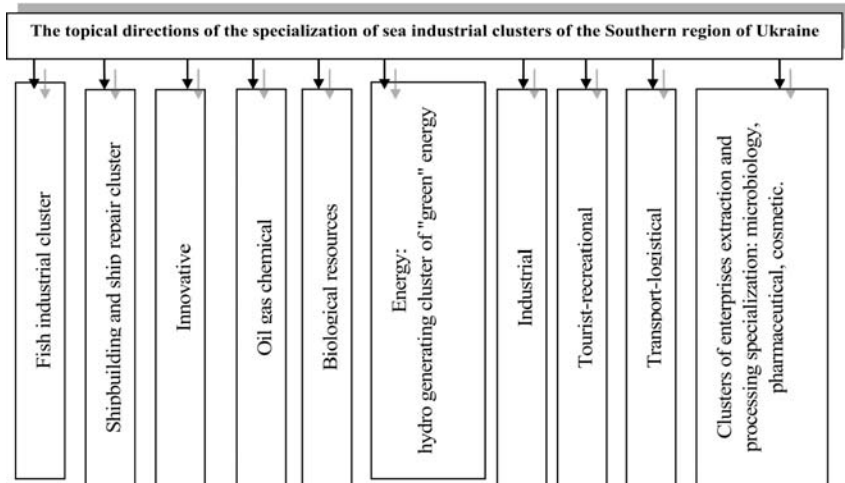


Fig. 1 Actual areas of specialization of marine economy clusters of the Southern region of Ukraine.

The resource potential of these areas is impressive in its scale. Only the lack of processed schemes and the experience of clustering explains that it has not yet engaged economically fully and to the appropriate measure. Each of the areas require targeted approach, concentrating on those kinds of marine economy activities, which are the most competitive and meet long-term national interests of our country. This requires the modernization of existing infrastructure,

the development of appropriate lasting programs and comprehensive schemes of their development, adequate funding, and to ensure the coordination of policy documents with the existing legislative framework.

Certain features that have a manifestation in every oblast of the Southern region of Ukraine and that must be considered when clustering are characteristics of the national marine economy as an integrated economic structure of intersectoral level. Some of the features are:

- catastrophic depreciation of fixed assets at the enterprises of sea industrial complex of Ukraine;
- high transportation costs;
- underdeveloped fuel and energy complex;
- the lack of qualified human resources;
- underdevelopment of service sector and service economy in maritime economy activities;
- deindustrialization and degradation of industrial production (including port infrastructure);
- the lack of purposeful public policy on the development of sea industrial complex;
- the lack of a legal declaration of Ukraine's national interests in the maritime industry;
- strong foreign competition;
- external economic pressure from neighboring and closely spaced maritime powers.

Given that the maritime economy complex as a new form of territorial organization of the productive forces includes many production and non-production areas that are affected by general economic trends, when assessing the potential and prospects of clustering one should definitely consider the opportunities and challenges of internal and external environment of Ukraine (tab. 1.)

High effectiveness of cluster approach for the modernization of the maritime economy complex in order to increase its competitiveness is confirmed by international experience. Forming a professionally developed long-term strategy to strengthen networks of relationships between actors - members of the cluster is main difficulty, but at the same time, also it is the main advantage while implementing cluster policy in basic maritime economy activity. That is, cluster policy is implemented in practice in the development of cluster strategy. This strategy must be flexible, be integrated to follow a logical necessity in order to base the marine economy activity exactly on territorial specificity.

Table 1

**SWOT - analysis of opportunities and obstacles
to internal and external environment Ukraine**

<p>Strong sides of the national economy of Ukraine</p> <ul style="list-style-type: none"> - Skilled workforce; - Favorable geographic location; - Location at the intersection of roads and railways; - Diversified economy; - Availability of unique industrial complexes and businesses of all sectors of production and services; - A growing number of economic agents that increase the level of products and services, and technological and management processes; - Well-developed scientific and educational spheres. 	<p>Weak sides of the national economy of Ukraine</p> <ul style="list-style-type: none"> - Economy relies on a limited number of large companies; - National economy is dependent on political decisions; - The poor state of most of the area of the road surface; - Extremely difficult economic situation in the territory of some regions and cities; - The outflow of skilled labor; - Technological backwardness of most enterprises that produce no competitive products; - Insufficient development of securities market; - Lack of investment; - Not heavy use of favorable geopolitical position. - A high level of energy dependence
<p>Favorable opportunities for the development of national economy</p> <ul style="list-style-type: none"> - Integration into the global system of finance and insurance; - Development of the domestic market and the increase of production and competitiveness of domestic products; - Increasing investment in the economy; - International, inter-regional and cross-border cooperation; - Ensuring the priority of allocation of budget capital investments in profitable and strategic perspective projects. 	<p>Challenges for the development of national economy</p> <ul style="list-style-type: none"> - Slow formation of powerful regional business groups; - Tendency to monopolize certain economy sectors by financial and industrial groups; - The decrease in the volume of extraction of energy resources due to the depletion of large deposits; - Presence in the market a significant number of foreign consumer goods and services; - Lack of funds to support research and innovation; - Negative demographic tendencies are aging and low population growth, negative net migration, outflows of scientific elite and talented young people abroad; - Slow socio-economic change in rural areas.

The strategy of development and distribution of productive forces on the basis of cluster approach, firstly, should take into account peculiarities of the resource base (natural and intellectual, industrial and technological, environmental and recreational, transport and transit globalization). Secondly, it should contain guidance and tools for effective and sustainable development of the regions, which among other things, are aimed to choose the optimum ratio of the market, the state and public institutions. Thirdly, it is necessary to highlight the main areas

of structural industrial, social, cultural, demographic and environmental policy. This necessitates legal provisions securing basic state cluster policy.

The main directions of state cluster policy should include [1, p. 56]:

- co-financing of scientific and analytical research of the cluster;
- identification of strengths and weaknesses of the cluster development, the cluster development programs, taking into account the orientations of socio-economic development of the region;
- creation of clusters' "intelligent platform" for sharing knowledge and establish contacts, attracting interested organizations to joint action within the cluster;
- implementation of programs to promote cluster enterprises output to foreign markets, conduct joint market research and promotional activities;
- improving the efficiency of vocational personnel training according to the needs of the cluster, including through updating curricula of educational institutions, organization of a joint programs for training and retraining of personnel.

In terms of public administration of the maritime economy clusters, state cluster policy in this area opens the possibility to implement a comprehensive, multi governmental approach on the regional level. Public administration of the maritime economy in this case is a five tiered hierarchical structure (national, regional, departmental, local and local (subjective) level), inside of which a strict vertical linear organizational dependence is absent in the traditional sense.

The horizontal coordination of communication between the parties of the marine economy activities is at the forefront, which is directly related to the organizational and industrial, financial and economic activities that are in the integration of complex interdependencies and form an integral subsystem.

At the regional level the integrity of the subsystem is achieved by diverse interactions between enterprises, quasi-organizations, local executive authorities and local government authorities in the study, development and use of the resource base, as well as general information, production and social infrastructure.

Guidelines of national marine policies, their relationship with the state budget, taking into account the basic provisions during the operation of the regional marine space and resources, as well as setting up foreign contacts on the availability of resources to certain waters provide the integrity of the sea industrial complex of the country at the state level.

The main obstacle in the implementation of the cluster approach and cluster initiatives inefficiency is the lack of legal provisions securing state cluster policy in Ukraine and, accordingly, the instruments for its implementation. Figure 2 illustrates elements of methodological support for its implementation on the example of sea industrial complex of the region.

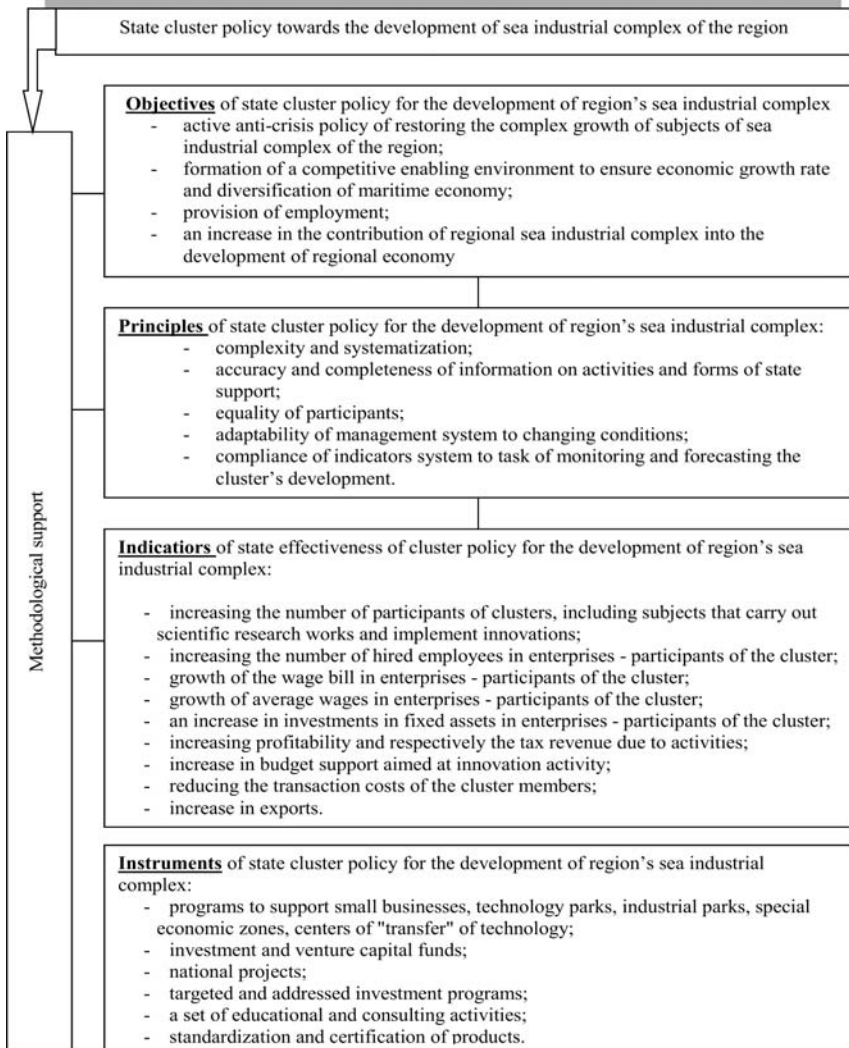


Fig.2. The element content of methodological support for the state of cluster development policy of the sea industrial complex of the region

Positive aspects of state cluster policy should be:

- the competitiveness of the sea industrial complex of the region through targeted technology of unification and cooperation of related entities;

- cluster is not only the most resilient to economic shocks, but it is also capable to entail less profitable areas, to determine competitiveness and development prospects of the region, thanks to the reorientation of production of high-tech products;

- creation of such associations can be an effective factor in solving a number of problems in the interests of Ukraine's economy, such as: protection of domestic market of Ukrainian products; consolidation of the financial resources of enterprises in order to invest in projects to develop its resource base and the revival of the domestic market of many products by supporting consuming industries;

- stabilization of the social situation in the regions of cluster's economic presence by creating new jobs and increasing taxation base by downloading existing and deploying new productions.

The most effective form of maritime economy clusters' development should be a comprehensive approach to determine their place and role during the implementation of the strategic objectives of socio-economic development of the region, taking into account the involvement of potential of business activity at the local level, possibilities of coordinating the efforts of imperious structures and business, the active use of various forms of public-private partnership, the involvement of scientific innovations and so on to develop the region's economy and to improve its competitiveness.

Effective functioning of maritime economy clusters will ensure maximum synergy effect and will coordinate work towards the satisfaction of social needs, coordination of regional and national economic interests to enhance the competitiveness of Ukraine's economy. The model of state regulation of development of maritime economy clusters is shown in Figure 3.

The institutionalized process, which is inappropriate to modern realities, is one of the problems of state cluster policy's development, including regarding the development of maritime economy clusters. At present, there are no institutional structures that would coordinate cluster development processes and organize the interaction of public authorities, research institutions, vertically integrated business groups and networking companies, educational institutions. This is to be done in order to facilitate access to new technologies, to risk sharing in various forms of joint economic activity, including for joint access to foreign markets, the organization of joint researches, the common use of knowledge and fixed assets, to accelerate the education at the expense of physical contact and the concentration of world-class professionals, to reduce transaction costs in various areas, by increasing trust between cluster's participants. Consequently, cluster initiatives are very difficult to prove to the implementation in real life.

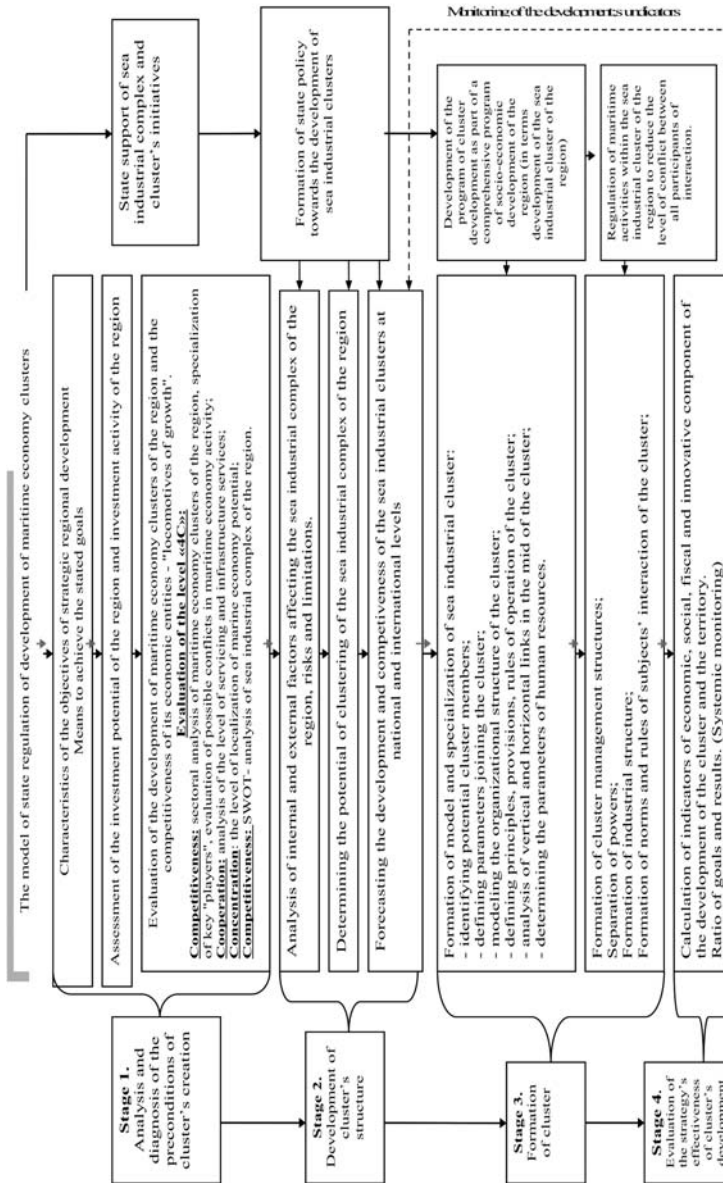


Figure 3. The model of state regulation of development of maritime economy clusters

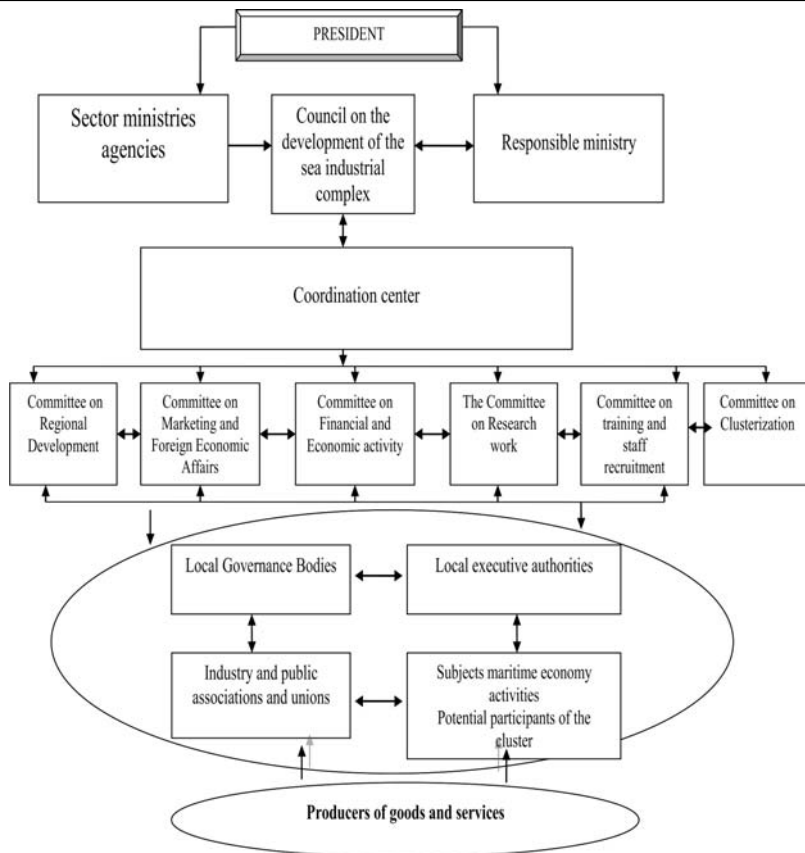


Figure 4. The institutional structure of the development of sea economic complex.

The institutional basis of managing maritime economy as a complex, multicomponent managed system is shown in Figure 4. It is represented by a set of relations of state institutions, organizational structures, institutions of training public-administrative staff etc., the common purpose of which is to ensure the development of marine economy of the country and the expansion of its foreign trade potential.

We propose the establishment of the Coordination Center (the Council for the Development of Sea Economic Complex) for the functional management in this area. Its activity should be devoted to increasing flexibility and effectiveness of regional development management with a focus on maritime

economy activities, smoothing conflictogenic interests of different users of the sea, strengthening integrative properties of “anchor enterprises - locomotives for regional development” and therefore ensuring the multiplier effect for the whole regional economy.

The polyfunctional quality, spatial and economic integrity of the maritime economy clusters have been formed by current economic, technological, social, environmental and other channels. Due to the expansion of maritime economy activities, the creation of new jobs because of a direct growth of employment, the development of industries (shipbuilding, ship repair, and port infrastructure), the sphere of support services and the implementation of social programs are provided.

Conclusions

Thus, globalization processes indirectly lead to an increase in efficiency of the cluster alliances, which in parallel with the principle of individual economic interest are able to realize the benefits of the principle of collective action based on the mutual support and coordination. In modern realities, such combination is possible only due to targeted and consistent support of state authorities of the development of cluster systems.

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