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TÍTULO: Mecanismo organizativo y económico para el desarrollo sostenible de la industria pesquera del territorio de Primorsky: enfoque de grupo.

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RESUMEN: Los principales órganos de gobierno en la formación y el funcionamiento del conglomerado de pesquerías son el consejo coordinador y la asociación de conglomerados, para los cuales se destacan las tareas y funciones. La aplicación de los mecanismos organizativos y económicos propuestos dará lugar a un aumento de la competitividad de los productos pesqueros, a un aumento en la participación del valor agregado en los productos vendidos, a la estimulación del potencial de innovación, a la mejora de la dotación de personal, y al crecimiento del empleo económico en la región.

PALABRAS CLAVES: industria pesquera, mecanismo organizativo y económico, desarrollo sostenible, enfoque de clúster.

TITLE: Organizational and economic mechanism for sustainable development of Fishing Industry of the Primorsky territory: Cluster Approach.

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ABSTRACT: The main governing bodies in the formation and functioning of fishery cluster are the coordinating council and cluster association, for which tasks and functions are highlighted. Application of the proposed organizational and economic mechanisms will lead to an increase in competitiveness of fish products, a raise in the share of value added in the products sold, stimulation of the innovation potential, improvement in staffing, and growth in economic employment in the region.

KEY WORDS: fishing industry, organizational and economic mechanism, sustainable development, cluster approach.

INTRODUCTION.

As a result of the spontaneous political and economic transformations, the economic mechanism of sustainable development of fisheries complex of the Primorsky Territoryos is observed over long decades of the Soviet period. On its basis, a new fishing industry has been formed, characterized by a variety of organizational and legal forms of ownership, disintegration of industrial structures, the lack of systematic regulation of economic processes, as well as instability to the effects of environmental threats.

Ensuring the sustainability of development of the fishing industry is a set of measures and means, creating conditions for continuous transition of the system under influence of external disturbances and management decisions from a less efficient state to a more efficient, progressive direction, and an intensive mode in accordance with strategic goals [Korneyko, 2018; Korneyko and Latkin, 2015].

Ensuring the sustainability of the development means, first of all, increasing the market share of occupied products of the fishing industry, maintaining a leading position in the market, increasing the value of newly created products per capita in the region. It requires a transition to new organizational forms of interaction of industrial organizations in fisheries.

The most effective of these is the cluster approach. Foreign experience in the formation of fishing clusters shows that the fundamental role in this process belongs to the state. Being a developer of cluster initiatives, it should create a favorable environment conducive to the processes of clusterization of the economy [Terenteva, et al. 2017; Chahine, 2018]. However, to implement this function, it is necessary to launch certain organizational and economic mechanisms for the formation and further functioning of an industrial cluster [Shashlo and Petruk 2017; Vorozhbit, et al. 2018; Jahan et al, 2016].

DEVELOPMENT.

Methodology.

The present study used the evidence of development of the fishing industry, which is contained in the materials of official statistics, as well as legislative strategic regulatory acts published in the periodical press and on the websites of news agencies.

The methodological basis of this study consists of a systematic approach, provisions of economic theory, and results of research by domestic and foreign authors. In the process, the known methods of comparative, retrospective and logical analysis and synthesis were used.

Results and discussion.

In order to form an industrial cluster, we need catalysts that trigger clustering processes in the industry. In order for these processes to continue their successful development and functioning, it is important to manage them, and provide them with resources and absorb the negative effects arising

from this type of interaction. At the same time, at the start-up stage, the most effective and key methods are economic, while at the stage of operating an industrial cluster, organizational methods are added to them [Arnason, 2012; Inchamnan, 2018; Haghshenas et al, 2015]. Therefore, for the successful functioning of industrial clusters, it is necessary to ensure balanced development and implementation of these organizational and economic methods. In accordance with the system approach, the main components of the organizational and economic mechanism are:

1) The subject is the driving force that meaningfully launches this mechanism into action.

2) An object is something that the subject is directed to.

3) Targets: programmable desired results of the mechanism.

4) Methods: tools, methods, technologies for achieving goals.

5) Forms: organizational and legal registration of methodological support.

6) Means: a set of types and sources of resources used to achieve the goals.

First of all, it is necessary to clarify who are the subjects of the developed formation mechanism. At this stage, they will be the state and regional authorities (macro environment of the industrial cluster), as well as the mesoscale of the industrial cluster resulting from the action of market processes. The object is the isolated enterprises of the fishing complex, which currently have a low degree of interaction with each other.

The impact of the subject on the object in the organizational and economic mechanism of sustainable development of the fishing industry based on the implementation of the cluster approach is governed by the system of principles that define this process, presented in Table 1. At the initial stage of the mechanism for the formation of an industrial cluster, the principles of goal-setting and system-based management are fundamental.

In general, the organizational and economic mechanism for the formation of the fishing cluster is presented in Figure 1.

Table 1 - Fundamental principles of the organizational and economic mechanism for the sustainable development of the fishing industry through the introduction of the cluster approach.

Principle	Characteristic
Government regulation and private partnership.	Common interests of the state and all elements of the cluster, economic responsibility, and regulatory support for the regulation of interaction.
Systematic management.	Complexity of goals and synchronic implementation of the tasks of forming economic clusters.
Strategic goal setting.	Target orientation of actions of regional authorities, and cluster subjects in the process of interaction.
Functionality.	Ensuring the functioning of the interaction in accordance with the goals.
Providing access to the resources of the interaction participants.	Development of economic levers that facilitate the process of access to various kinds of resources (information, human, financial, etc.).
Competitiveness.	Intense competition in the domestic market, aimed at improving the quality and innovativeness of products with a high degree of adaptation to the changes surrounding the macro- and meso-environment.
Specialization.	Development within the priority for the development of regional competitiveness types of economic activity.
Synergy effect.	Costs at all stages of each organization's production, in a cluster overlap from the cumulative interaction effect to a greater extent than organizations that are not members of the cluster.
Centralization.	The presence of a control center coordinating the interaction processes.
Concentration.	Close geographical location of objects.
Partnerships.	Exchange of knowledge, innovations, highly qualified personnel, access to the common use of fixed assets and expensive research.

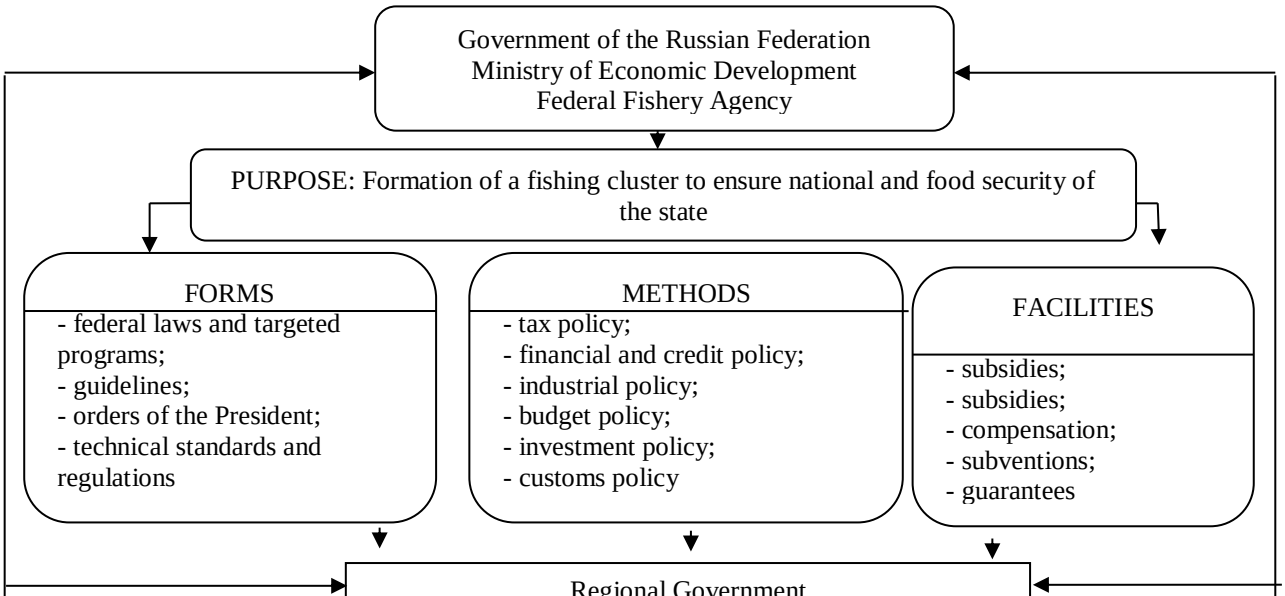

Figure 1 - The organizational and economic mechanism for formation of the fishing cluster.

Due to the fact that in this study the embodiment of the organizational and economic mechanism is a cluster form of interaction between industrial organizations; it is necessary to define the following terms: mission, goals, objectives, and the procedure for developing a strategy that will govern the further development of the fishing cluster. This global mission of the fishing cluster should be realized through a system of strategic goals. Not only the definition of the tasks that the cluster faces, but also the extent to which organizations will be interested in becoming its participants depends on how correctly the goals are formulated. Therefore, the strategic goals should not be abstract and

impracticable, they should take into account the interests of the Government, regional and local authorities, all participants of interaction. They should be socially oriented as well.

The main mission pursued by the creation of the fishing cluster of the Primorsky Territory is due to the current economic situation of the Russian Federation. According to the state program of the Russian Federation "Development of the Fisheries Complex", which is approved by the Government of the Russian Federation No. 314 of April 15, 2014, the real mission of the development of fisheries activities are:

1) Ensuring the transition from the export-raw type to the innovative type of development based on conservation, reproduction, rational use of aquatic biological resources, and the introduction of new technologies.

2) Ensuring global competitiveness of the goods and services produced by the Russian fishery complex.

3) Ensuring national security through food security.

In accordance with this integrated goal, it is necessary to develop an integrated approach to its implementation, which determines the formulation and further solution of the following tasks, presented in Figure 2.

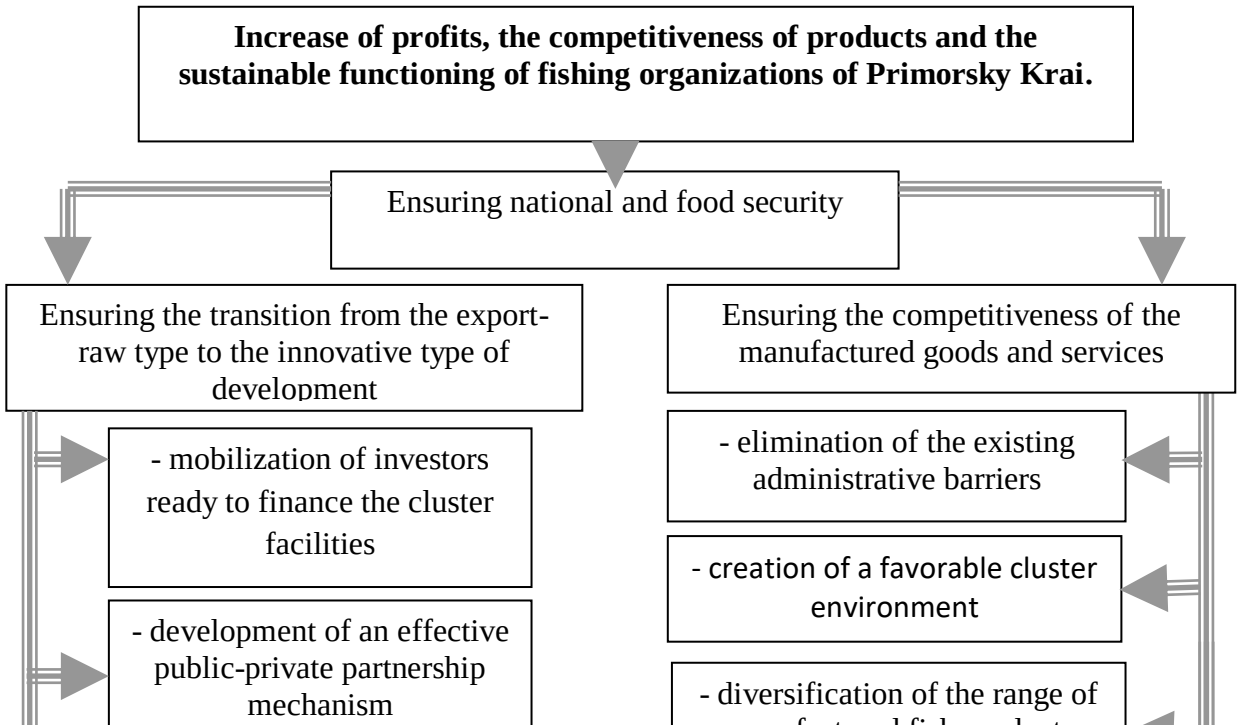

Figure 2 - The hierarchy of goals and objectives of the fishing cluster of Primorsky Krai.

At the stage of the formation of an industrial cluster, the state of the meso-environment factors is important. The industrial cluster meso-environment is represented by a group of factors, identified by M. Porter (factors of production, demand conditions, related and auxiliary industries, conditions of strategic development and competition). They are also modernized in the previous studies by the authors [Vorozhbit, et al. 2018; Abayeva, 2018; Marshall, 2013].

Having identified the most negative of these factors, using quantitative methods for their assessment, it becomes possible to determine the economic mechanisms that will become catalysts for the clustering process in this industry. Depending on the prerequisites of clustering and the least developed factors of the industry in the subject of the Russian Federation, appropriate methods are developed, on the basis of which the tools and measures for adjusting the industrial policy are formed. The implementation of these activities is able to carry out both from the subject of the organizational and economic mechanism, and from the object - fishing enterprises. This is explained by the fact that

industrial organizations can also influence the state of the mesic environment and clustering processes.

The methods are implemented through a set of forms. These forms are the adoption of regulatory acts at the federal, regional and municipal levels and funds allocated in the form of subsidies, as well as compensations, subsidies, guarantees, sureties, and loans to fisheries organizations.

Having considered the organizational and economic mechanism for the formation of the fishing cluster, we turn to the mechanism of its functioning, shown in Figure 3. On the basis of the initial elements of the mechanism that we specified; it is possible to specify them. So, its subject is the Cluster Coordination Council. The object is industrial organizations, namely the core of the cluster. The subject acts on an object for a specific purpose. For example, ensuring the sustainability of the development of industrial organizations in order to work effectively, as well as to achieve the results that are important for the region of the Russian Federation. At the same time, the implementation of this goal is realized through a set of forms, administrative, regulatory, economic methods, and means.

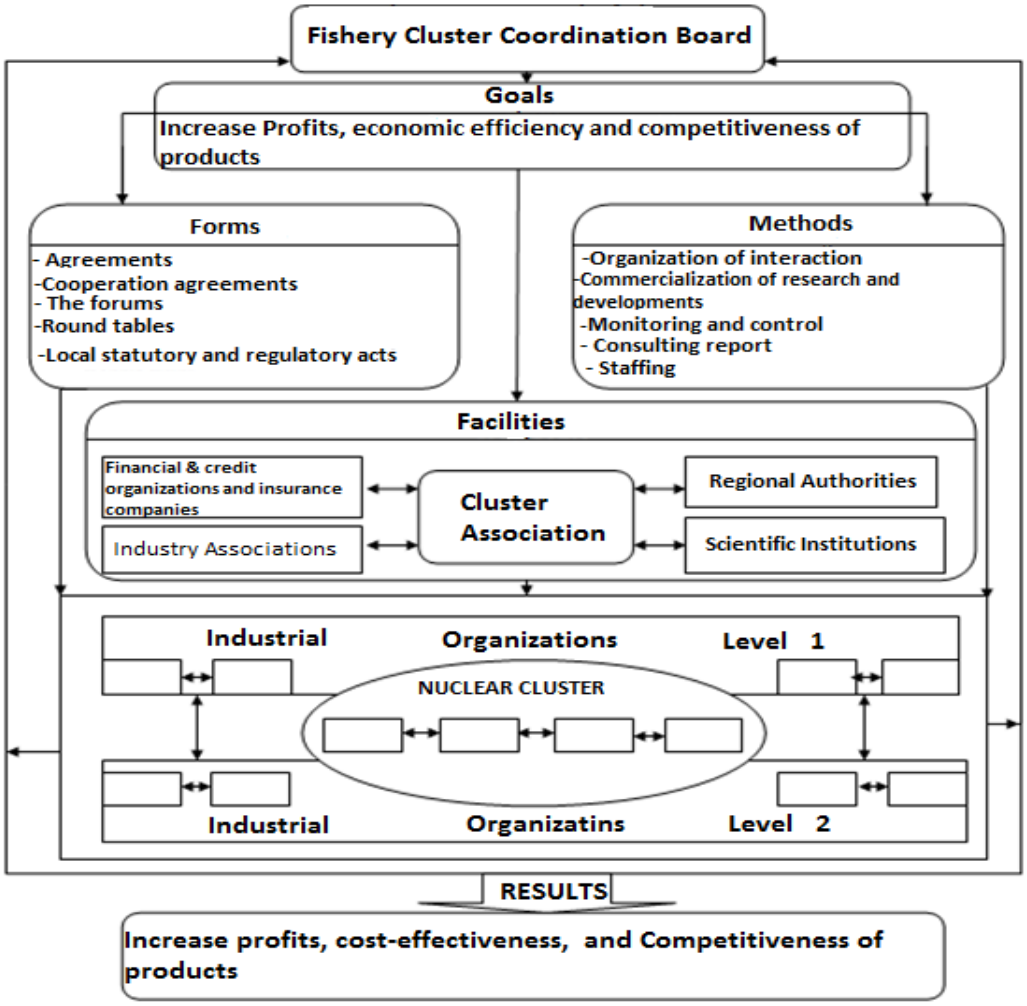

Figure 3 - The organizational and economic mechanism of the functioning of the fishing cluster.

In this case, a form is an existing form of interaction between industrial organizations that can be applied in the functioning of a cluster — a simple partnership agreement, a cooperation agreement, a consolidated group, regular round tables, conferences, etc.

The subject at the stage of operation is the cluster coordination council. The means for this council is the cluster association interacting with it and with various administrative, scientific, financial and credit institutions. The object of the organizational-economic mechanism is a set of fishing organizations, including the core and enterprises of I, II levels.

In accordance with the principles of functionality, and centralization and systemic management, it is necessary to create a management structure regulating the activities for the successful functioning of the fisheries cluster

The main role in the management of the industrial cluster is played by two key management structures:

- Cluster association.
- Coordination council of the cluster.

Each of these structures has a different level of functional load on the organization of the system industrial structures' interaction in fisheries activities. Let us dwell on each of them.

So, the cluster association is a non-profit organization whose main functions are to represent the interests of the cluster, as well as the responsibility for its strategic development. Legally, an organization may be framed as an association, which is regulated by the Civil Code of the Russian Federation [Shashlo and Petruk 2017]. The anticipated tasks and participants of this management structure are presented in table 2.

Table 2 - Tasks and participants of a cluster association.

Level	Participant	Tasks
Regional authorities	Department of Fisheries and Aquatic Biological Resources of Primorsky Krai Investment Agency of Primorsky Krai Department of Economics and Strategic Development of Primorsky Krai	- Agitation and motivation of potential cluster members; - attraction of investments for the development of the cluster; - Advising participants on organizational, financial and managerial issues.

Level	Participant	Tasks
Associations and fishery associations	Association of Fishery Enterprises of Primorsky Krai Pollack Association Association of Farmers Crab Association of Developers, Manufacturers, and Suppliers of Fish Processing Complexes and Equipment Far Eastern Aquaculture Association	- Development of strategic directions of development, goals, objectives and mission of the cluster; - Coordination of the activities of the participants of the association with the aim of organizing and rational interaction between auxiliary and life-supporting structures; - Advising participants on the production and regulation of fisheries activities; - Regulation of the regulatory framework of the fisheries complex.
Universities	Far Eastern State Technical Fisheries University Far Eastern Federal University Vladivostok State University of Economics and Service secondary special educational institutions	- Monitoring and economic evaluation of the functioning of the cluster; - Advising participants on organizational, financial and managerial issues; - Providing the cluster with human resources; - Conducting economic and marketing research.
Scientific research institute	TINRO-Center Institute of Marine Biology, Far East Branch, Russian Academy of Sciences; Pacific Institute of Bioorganic Chemistry of the Far Eastern Branch of the Russian Academy of Sciences; Institute of Biology and Soil Sciences of the Far East Branch of the Russian Academy of Sciences; Institute of Marine Technology Problems of the Far East Branch of the Russian Academy of Sciences	- Study of aquatic biological resources in order to conduct efficient and rational fishing; - Development of innovative technologies for the production and processing of fish products.
Auxiliary structures	Credit organizations Insurance organizations Law Firm	- Ensuring access to loans under preferential conditions guaranteed by regional authorities; - Conclusion of legal agreements with economic entities of the cluster; - Regulation of factoring and insurance operations of the cluster.

A feature of the cluster association is that the basis for its activity has already been formed and is functioning quite successfully in the territory of Primorsky Krai [Lebedinskaya, et al. 2018; Baldina et al. 2017; Lima et al, 2018]. However, when combining the participants reviewed in Table 1, it is possible to preserve and multiply the interests that were pursued before the creation of the fishing cluster. At the same time, interaction within a single system will simplify their activities. Thus, the

cluster association is more responsible for the resource, information and personnel support. It dictates the need to create a structure that will directly manage the cluster education.

Such a role belongs to the Cluster Coordination Council. This council interacts with the cluster association. It forms the necessary requirements for the rational organization of the production process in the cluster, which encourages them to further implementation. In essence, the coordination council is the management of the "core" of the cluster. Due to this circumstance, the heads of the key companies of the fishing industry automatically become its participants.

The main function performed by the coordination council is to coordinate and organize the interaction of the participants of the fishing cluster, which in turn, involves the following tasks:

1) The establishment of supply chains between producers of fishery products of levels 1, 2, 3 within their type of economic activity.

2) Continuous interaction on all development issues with a cluster association.

3) Solving current production issues.

4) search for sales channels.

5) Development of mechanisms for the interaction of participants in the form of meetings, plenary sessions, meetings, etc.

6) Inducement of innovative development of companies.

7) Making the necessary management decisions to improve the efficiency of the cluster.

The management activities of the coordination council are more focused on regulating the activities of the cluster core. However, the core is the concentration of enterprises of various sizes and types of economic activity. Therefore, it is important to identify possible types of interactions between them. In our opinion, the most comprehensive approach to the development of possible types and types of relations between industrial organizations in the framework of cluster development, is proposed by E. Stepanova. The scientist distinguishes between industrial, technological, marketing, scientific,

financial, and credit and infrastructure types of connections. This system of interrelations is applied by us in the description of the organizational-economic mechanism of the fishing cluster's functioning.

Production links should be implemented on the basis of the cluster core, which consists of large fish processing organizations. Having sufficient production capacity, it can attract more industrial organizations of Level I and II. They carry out identical production processes, but do not have their own production base, and therefore, have less competitive products. These relations can be realized in the form of subcontracting, execution of contracts, agreements, and simple partnership. Also, a large enterprise may attract enterprises of auxiliary industries, i.e. companies for the repair and maintenance of factory equipment and so on. The result of the implementation of this type of connections in the cluster is to reduce production costs, thereby increasing the competitiveness of products.

The supply type of relationship implies the organization of interaction among organizations with a single market segment, identical distribution channels, and procurement procedures. As part of the cluster interaction of industrial structures, it is proposed to create a unified organization for marketing activities. Interacting with all cluster members, its main functions are:

- Development of a single brand of fish products.
- Search and attraction of trading partners in the country and abroad.
- Construction of the sales chain through the creation of retail outlets at the level of the region and abroad.
- Development and implementation of an advertising campaign.
- Agitation and promotion of beneficial consumption of fish products among the local population.

The scientific type of interconnections should be monitored by the cluster fishery association. In its interests, it is necessary to organize joint research and development. Funding for their implementation should be distributed in proportion to all interested members of the cluster; for example, fishery enterprises sponsor expeditions to analyze the fishery, fish processing organizations make recommendations on the planned technologies for processing fish products. This measure will reduce the cost of the innovation component, make them independent of public investment, and actively implement the scientific results obtained in the production process.

Within the framework of technological types of interrelations, industrial organizations can organize joint technological developments, progressively working to improve the quality of fish products. Sharing knowledge and experience will allow developing more advanced methods of catching and processing fish products. This creates a favorable basis for the emergence of new ideas to improve competitiveness.

Financial and credit relations between the objects of interaction involve joint participation in attracting loans, and their use in working capital. In modern conditions of high interest rates, joint settlements on loans are a mutually beneficial tool for organizations, since they allow reducing risks and improving their financial results [Fridman, 2010].

The latter type of interconnection is infrastructure. It is the most applicable and characteristic of the fishing industry as capital-intensive production. The economic efficiency of production processes directly depends on the condition of infrastructure facilities (ports, refrigeration units). Therefore, this type of relationship enables the joint financing of facilities based on public-private partnership mechanisms, as well as their further joint use.

CONCLUSIONS.

The formation and operation of fishing clusters will allow to achieve a synergistic effect through a single production, technological, infrastructure base, as well as through the joint distribution of resources.

The developed organizational and economic mechanism involves the management system of the fisheries complex of the Primorsky Territory's industrial structures. This mechanism is expressed in the application of a specific regulatory framework, management structures, and various methods for starting clustering processes.

Application of the proposed organizational and economic mechanisms will lead to the following economic effects for the regional economy: improving the competitiveness of fish products, increasing the share of value added in products sold to external and domestic markets, stimulating innovative potential, improving staffing, and increasing economic employment in the region.

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