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FOREIGN EXPERIENCE IN DEVELOPING THE INFRASTRUCTURE OF THE FISHING INDUSTRY

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Abstract

According to research, one of the important directions for increasing the place and importance of the fishing industry in the national economy of the country, providing the population with fish and fish products, ensuring the effective use of existing and developing resources is the creation of the fish farming infrastructure taking into account the requirements and standards of the time and improving its effective operation.

Forming the infrastructure of the fish farming sector and improving its activities is a multifaceted and relatively labor-intensive task, as well as material and financial resources. One of the important places in the infrastructure system of the fish farming sector is occupied by scientific research and scientific support for the development of the industry. From this point of view, in our opinion, it is advisable to resolve these issues based on foreign experience. This article highlights foreign experience in the formation and development of infrastructure in the fish farming sector, and provides relevant conclusions and recommendations.

Keywords: foreign experience, infrastructure, fish and fish products, consulting, fishing equipment, machinery and technology, modernization of fishing vessels and drilling rigs, scientific services, etc.

Introduction. The development of the activities of service infrastructure entities in the fishing industry is aimed, first of all, at increasing the types of services provided by these entities, improving their quality, ensuring that services are based on creativity and innovative solutions, and ensuring the availability of opportunities and conditions, so that customers can use these services to ensure that they meet the capabilities and requirements of consumers and achieve satisfaction and, finally, this is related to ensuring the security, completeness, guarantee, stability and compliance of the services with the actual reality, and these issues should be considered as a priority when organizing a fishing net maintenance system.

The role and place of the fishing industry in providing the population of our republic with environmentally friendly, dietary and vitamin-rich food products is increasing every year.

Over the past 2-3 years, the President and Government of our republic have adopted a Strategy, programs and activities, a "Road Map" for the innovative development of the fishing industry, as well as documents adopted and the scope of measures implemented, support the industry, the national development of this industry. This is a sign of a growing role and position in our economy.

Research shows that there are opportunities and ways to develop the fishing industry in our republic based on science and innovation and the digital economy system, ultimately providing the population with fish and fish products. One of these ways is the further development and promotion of the industry through the formation of infrastructure for the fishing industry based on world standards and requirements.

If you look at the history of the management system of the global agricultural economy, then in its history, over the past half century, in a number of countries various models for the development of industries and sectors have been developed and implemented, based on the assigned tasks and the set goal. In the special economic and popular literature, it is widely reported that high results are achieved through the implementation of various named models, based on the specific problem, the problem being solved and the development of the priority industry in each country.

In the global fisheries management system, one can observe the Indian model and experience of development

of the fishing industry, known as the "Blue Revolution". In 2015, the country developed another five-year plan for the integrated development of fisheries and aquaculture. This plan is called the "Blue Revolution", the main goal of which is to increase fish production by 6-8%, and for this purpose, based on investment projects, it is planned to allocate 452.9 million US dollars over the next five years. It was decided that this collective activity would be carried out by the "National Fisheries Development Council" [1].

The Blue Revolution model is a new strategy for the integrated development of the Indian fishing industry, which involves all interested organizations and business entities associated with this industry: fish farms, entrepreneurs engaged in retail and wholesale trade of fish and fish products, fish processors and exporters, and also provides support for the training system for specialists in this field.

Literature review. On the theoretical and practical aspects of developing the infrastructure of the fishing industry and improving organizational and economic mechanisms - Kurbanov A.R., Kurbanov B.G., Mirzaev U.T., Kholmiraev D., Shokhimardonov D., Mamatov F.K. Elmurodova, A. Mukhtorov [11, 12, 13, 14] and foreigners I. Okumus, A. B. Patel, A. Yakupitdiyage, D. Ts. Dorzhiev, E. V. Levkina, O. N. Ponomareva, I. A. Chernyavsky, G. E. Economists and biologists such as Servetnik, I.P. Novozhenin [15, 16, 17, 18, 19, 20].

However, the theoretical and practical aspects of the above-mentioned problems are not sufficiently studied in their works. Therefore, taking into account the conditions of the regions of our Republic and the insufficient satisfaction of the population's demand for fish products, it is necessary to study directions for increasing the efficiency of using infrastructure in the development of the fish farming sector.

Materials and analysis. It should be noted that India ranks second in the world in terms of fish catches after China and fourth in the world in terms of fish exports. The fishing sector annually brings in \$5.51 billion to the country's budget. It generates revenue of US\$14.5 million from this line of business. Since a person is directly employed, he is of great importance in the economy of territorial units located near the river and sea shores of this sector.

In the activities carried out by the Ministry of Fisheries

and Livestock of India to support fisheries enterprises in the regions of the country, to introduce new technologies, as well as to implement measures to reduce the impact of natural disasters, and also give priority to increasing the production of aquaculture products and ocean water, which is recognized main task. A total of \$75.6 million has been allocated for activities in this direction. The plan is to send US dollars.

Today, the Indian national economy is implementing the Fisheries Development Model, which is described as a new Blue Revolution policy for the development of the fisheries sector for 2020-2021 [1, 2].

This model differs from the previous "Blue Revolution" in that it is focused on the integration of production, which ensures annual industry growth of at least 8%.

In the next Blue Revolution model, priority is given to the following areas of development of the fishing industry [1, 2]:

- transformation of the fishing industry;
- increase the influx of investment by increasing the investment attractiveness of the industry;
- training, education and retraining of personnel for the fishing industry, as well as improving their qualifications.

In recent years, the country has given priority to the production of fish in special reservoirs - aquaculture, growing fish in lakes and rivers, as well as in artificial reservoirs. In such conditions, priority is given to state support for farming enterprises. In fishing activities, as well as the allocation of financial resources for the formation of special infrastructure for them.

In this model, the following are identified as the main directions for the formation and development of the fishing industry infrastructure:

- new fisheries - construction of special devices and structures on the shore and on the beach;
- modernization of fishing vessels and drilling rigs;
- organizing a training system for fishermen at a modern level (based on the digital economy and IT technologies);
- decide that the fishing industry is one of the important types of employment for the population, and support and finance this type of activity.

Due to the fact that the formation of the fishing industry infrastructure in the country requires a large amount of investment, complex engineering potential and relatively more time, priority is given to the development of the fishing industry infrastructure based on a public-private partnership system in the "Blue Revolution" model [1].

The main goal of this development path is to increase fish production and fisheries productivity through fisheries resources and aquaculture, for which US\$ 75.6 million is planned to be allocated over the next five years.

This can be seen as a unique aspect of the development and infrastructure development of the Indian fisheries sector.

The Fisheries and Aquaculture Infrastructure Development Fund was created to implement measures aimed at developing the infrastructure of the country's fishing sector.

It is noteworthy that activities in this direction are financed and controlled by the state under the responsibility of the "Ministry of Fisheries and Livestock" through the "Fisheries and Aquaculture Infrastructure Development Fund" on a project basis. This fund is mainly aimed at creating a fishing system, the sale of fish and fish products, as well as an infrastructure system aimed at eliminating resource shortages.

At the same time, the system of servicing the fishing industry: the formation of points for unloading, transportation, storage of fish, delivery of fish and fish products by transport, the formation of modern fish markets, the supply of fish farms with feed and fish fry, the creation of modern training centers for fishermen, an enterprise that develops fish feed and will be aimed at creating factories, creating a laboratory for diagnosing fish diseases and financing such laboratories by the state.

For projects implemented on the basis of this fund, 20% of the project cost provided by the contractor will be financed from its own funds, and 80% from the fund.

The government allocated \$1.0 billion to this fund in the 2018-2019 financial year to implement five-year project activities to develop fisheries infrastructure. If it allocates funds in the amount of US dollars, then 2.71 billion will be allocated for projects in this category in the 2019-2020 financial year. It is planned to allocate funds in the amount of US dollars.

All issues related to the fisheries sector, taking into account the role of the fisheries sector in the national economy of India, especially in the economic and social life of the ocean and large inland water bodies and coastal areas: development policies, orientation, modernization and integration, entrepreneurship support, infrastructure formation, and economic and financial support from the state is coordinated by the National Fisheries Board (NFB). The main objective of the NFB is to coordinate the full and comprehensive development of the fisheries sector in the country and ensure an increase in fish production and fish productivity [1, 8, 9, 10].

One of the main tasks of this Council is the innovative development of the fishing industry, the introduction of resource-efficient technologies into the industry, scientific and methodological consulting of production, providing entrepreneurs with information and information, and most importantly, increasing the level of knowledge and the qualifications of persons directly and indirectly employed in the industry, forming the necessary infrastructure for this.

Research has shown that one of the important directions for increasing the role and importance of the fishing industry in the national economy of the country, providing the population with fish and fish products, ensuring the effective use of existing and developing resources is the formation of a fishing network infrastructure based on the requirements and standards of the time, and ensuring the effective operation of existing, improving relationships.

Forming the infrastructure of a fishing network and improving its activities is a multifaceted and relatively labor-intensive task, as well as material and financial resources. In our opinion, based on foreign experience, it is advisable to begin these issues by solving the following interrelated problems:

the first direction, improving the structural and organizational-territorial structure of the fishing network infrastructure;

the second direction, improving the activities of infrastructure entities included in the fishing network infrastructure, and introducing effective mechanisms of state support;

- the third direction, improvement and development of the activities of infrastructure entities servicing the fishing network, with the priority of developing a public-private partnership system in the field of breeding (supplying juveniles) of fish, preparation and delivery of fish feed;

- fourth direction, strengthening state support for the

activities of infrastructure entities servicing the fishing network;

- improving the activities of infrastructure entities of the fifth direction, providing scientific services to the fishing industry and training and advanced training of personnel, as well as the mechanism for their state support;

- formation of an information and sales base for fisheries based on the digital economy and IT technologies, platforms for technical and technological modernization of the industry, etc.

Discussions and results. In general, we can conclude that it is advisable to provide subsidies to intensive fish farms in order to reduce energy consumption costs, given the fact that sturgeon, salmon, trout and carp fish are grown on a global scale using high-protein fish feed. Expanding the mechanism for stimulating fish farming in irrigation systems (canals) by exempting them from the single tax payment and the single land tax, directing the released funds to water management organizations for the use of irrigation systems until 2030 [3].

Problems:

- modernization of fishing network infrastructure;
- providing fisheries with modern and high-performance fishing equipment, machinery and technology;

- supply of fish and fish products to consumers and retail chains in a form that ensures their attractiveness in the form of consumer goods;

- that the equipment and technological lines used are not only physically, but also morally obsolete;

- inconsistency of fish and fishery product standards with the requirements of international markets, lack of financial resources for the development and implementation of new ones;

- incomplete development of standard technological maps for material and labor costs used in growing fish and fishery products, lack of financial resources for the development of new ones and, in some cases, lack of qualified specialists;

- a somewhat outdated fleet of fishing equipment, limited financial capabilities of fisheries to purchase a new high-performance and resource-saving model or modernize an existing one;

- that the quality of service is not at the proper level and existing ones need to be improved;

- lack of enterprises specializing in providing fish farms with high-quality and highly profitable juvenile fish;

- the location of enterprises providing fish farms with the required amount of feed is not optimal, they are located somewhat far from the main consumers, and it is necessary to optimize the location of such enterprises;

- repair of the laboratory for analyzing the hydrochemical composition of fish water and equipping it according to international standards;

- development of a standard technological map of material consumption and labor costs for technologies for growing highly productive fish species.

- widespread development of the production of nutritious feed by increasing the capacity of enterprises that provide fish farms with diverse, high-quality, nutritious and nutrient-rich feed resources.

It is worth noting that the development of the process of cooperation in the republic in the production of fish products, their processing and sale of finished products will ensure that fisheries receive more benefits from

increasing fish production volumes. From this point of view, it is important to form freely organized production cooperation based on equality. Also, to ensure the stability of the domestic market, pay attention to the areas of organizational and economic stimulation of aquaculture development, that is, regional specialization and location, the use of resource-efficient technologies that reduce production costs, the creation of an insurance, finance and credit system, as well as areas of organizational development and expected results (Figure 1).

From this point of view, in our opinion, it is necessary to study the areas of economic support from the state in the development of infrastructures in the network:

- during the period of creation of fishery farms, exempt them from taxes for two years, and also provide them with preferential loans for a period of three years for the construction and repair of ponds and the organization of their initial activities;

- allocation of long-term targeted loans to fisheries, regardless of ownership, for the purchase of equipment for the formation of a broodstock herd, the organization of a hatchery workshop;

- creation of a system for providing interest-free loans for a period of two years for the creation of enterprises for primary and advanced fish processing;

- organization and regular holding of educational seminars and exhibitions aimed at increasing the economic and legal knowledge of fishermen in order to attract investment for the creation and development of small shops and processing enterprises in the network;

- formation of a wholesale market for fish products in the regions of our republic and improvement of the sale of fish products in general;

- improve the breeding of fish species grown in our country, strengthen research work on the acclimatization of fish species suitable for our climate;

- establishing the production of special granulated, balanced high-protein feed for fisheries.

Table 1
Directions for organizational and economic stimulation of the development of fishery infrastructure to ensure the stability of the domestic market [3].

ECONOMIC	ORGANIZATIONAL
<p>In the direction of regional specialization and placement.</p> <p>Expected results: Taking into account the natural features of the area, suitable fish species will be grown.</p>	<p>In the direction of creating biological laboratories for analyzing the quality of fish and fish feed.</p> <p>Expected results: The quality and safety of fish supplied to consumers will be ensured.</p>
<p>In the direction of using resource-saving technologies, which ensures a reduction in production costs.</p> <p>Expected results: As a result of the introduction of resource-saving technologies, the cost of growing fish in fisheries will decrease by 20-25%.</p>	<p>Formation of a statistical database towards the creation of a platform.</p> <p>Expected results: A database on fish farming, marketing, processing and storage, and consumption indicators will be created and posted on an online platform.</p>
<p>Creation of an insurance system.</p> <p>Expected results: Damage caused by water salinity can be encouraged by setting the sum insured at 30% and the insurance premium at 5%.</p>	<p>In the direction of developing infrastructure facilities.</p> <p>Expected results: There will be an opportunity to organize and develop some kind of consulting services in this area.</p>
<p>In the direction of development of innovative activities.</p> <p>Expected results: The development of science, best practices and the adoption of digital technologies will accelerate.</p>	<p>Strengthening scientific research, establishing staffing.</p> <p>Expected results: The efficiency of scientific research on existing problems in the field will increase, innovative developments will be introduced into practice.</p>
<p>In the field of financing and lending.</p> <p>Expected results: State subsidies of 50% of the costs of water purification in fisheries will be introduced for 5 years and 30% for the next 3 years.</p>	<p>In the direction of development of the education and training system.</p> <p>Expected results: Qualified personnel will be formed based on modern knowledge, skills and innovative methods.</p>

Conclusions and recommendations. In developing the industry, it is advisable to pay special attention to ensuring the country's food security and improving the welfare of the population in areas where aquaculture and fisheries can be of great importance (especially in rural areas), and to establish the restoration of the fishing network in the form of a structured and responsible organization as the main focus. From this point of view, it is advisable for the government, the private sector and financial institutions to take measures in the following main areas of sector development:

- development and modernization of the fishing industry and aquaculture based on a market economy;
- efficient and sustainable use of the country's available water resources for fish farming;
- Mechanism of economic support by the state for the activities of fish farms of the republic in order to achieve promising indicators:
 - during the period of creation of farms in the fishing sector, they will be exempt from taxes for two years, and they will also be provided with preferential loans for three years for the construction and repair of ponds and the organization of their initial activities;
 - allocation of long-term targeted loans to fisheries, regardless of ownership, for the purchase of equipment for

the formation of a broodstock herd, the organization of a hatchery workshop;

- creation of a system for providing interest-free loans for a period of two years for the creation of enterprises for primary and advanced fish processing;
- organization and regular holding of educational seminars and exhibitions aimed at increasing the economic and legal knowledge of fishermen in order to attract investment for the creation and development of small shops and processing enterprises in the network;
- formation of a wholesale market for fish products in the regions of our republic and improvement of the sale of fish products in general;
- it is desirable to improve the breeding of fish species grown in our country, to strengthen research work on the acclimatization of fish species suitable for our climate.

In general, the role of aquaculture in the development and improvement of fisheries efficiency is very great. Today it is desirable to increase the volume of fish production in intensive ponds, reproduce juvenile fish, introduce cage fish farming (cages) and implement government incentives in this regard.

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