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Problems of Improving the Socio-Economic Efficiency of Fishing Activities in the Arctic *

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Abstract. The data on the growth of prices for Arctic fish species in 2015, 2018, compared to 2013, the period of the relatively “hard” ruble, are presented. The reasons for the price increase are shown. An important one is the replacement of the “historical” method of providing biological resources to fishermen with the “auction” one, since it is associated with payment for the right to harvest. This leads to an increase in production costs and prices for fish products, as well as to a decrease in fish consumption by the population. Objectives of the article: to develop proposals to increase the supply of products from Arctic fish to Russian markets (primarily to the markets of the North-West of the country) and to reduce their prices. The relevance of the article is due to the lack of practical measures to reduce the prices of Arctic fish products and increase consumption. The most important results: the author's proposals to stimulate increased sales of fish products in Russia provided by the fish products of the Northern basin are substantiated. Practical significance: it is shown that the use of the developed proposals will reduce consumer prices for fish products, an increase in visits of fishing vessels to Arctic ports and unloading of fish products will lead to a multiplier effect by improving the activities of fish processing enterprises and servicing the fishing fleet.

Keywords: *Western Arctic, fishing, socio-economic efficiency, improvement measure*

Introduction

High prices for fish products and their low consumption by the Russian population have recently been frequently discussed in scientific and analytical publications. Various ways to solve them have been proposed. For example, V.I. Sauskan and co-authors suggest that “... a new socially oriented state policy is necessary, [...] which should allow the industry to significantly intensify its participation in ensuring the food security of the country” in the article “Modern Problems of Sustainable Development of the Fishery Sector of the Russian Economy and Ways to Solve Them” [1]. E.V. Osipov and G.S. Pavlov see a solution to problems in the creation of a state fisheries corporation (SFC), the purpose of which is “the development of underutilized aquatic biological resources (ABR), including quota-based ones, the sale of which will be carried out on the domestic market” [2]. Mnatsakanyan A.G. and Kharin A.G. state that the development of fishery in Russia should not take place only under the influence of market mechanisms or actions of administrative bodies. “The state, together with the business community, needs to develop collective solutions,

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the priority of which should be the saturation of the internal market with various qualitative and accessible fish products..." [3].

The implementation of the above proposals to change the socially oriented policy in the field of fisheries, to create a state fisheries corporation and to change the policy of exporting fish products, in our opinion, is unlikely.

Issues of fish prices and a decrease in demand for fish products are constantly discussed in the analytical publication "Fish Courier-Profi" and other sources by officials and fish industry workers. The culprits of the current situation are mostly cited as dealers and retailers. However, the initiator of the price increase was fisheries, which raised prices for cod in Northwest Russia in 2014 by 100%, for other fish species — by slightly lower values. Therefore, it is necessary to start looking for ways to reduce retail prices for fish products from selling (wholesale) prices. Rules on access to biological resources for fishing can be an instrument to reduce prices. Bioresources are public property. Therefore, the system of access to them should serve the interests of the state and society.

Main section

The State Council is the body that determines the main directions of development of some sectors of the economy of the Russian Federation. The last meeting of the Presidium of the State Council for the Development of Fisheries was held on November 19, 2015 in the context of the devaluation of the ruble by about 100% and the growth of first-hand wholesale prices in the North-West of Russia for the main types of fish in the Arctic, compared with prices at the end of 2013: cod — 80.6%, haddock — 38.4%, mackerel — 53.3%, herring — 63.3%. Prices for other fish species from the Arctic seas and other basins have also increased ¹. That is why, when opening the meeting, the President of the Russian Federation, V.V. Putin said: "The main objective of our meeting is to identify measures that will contribute to filling the Russian market with quality and affordable domestic products".

Since 2004 and until now, fishing in Russia, including in the Arctic waters, has been operating under conditions of large state preferences and, along with agriculture and mining, exploits natural resources, the payment for which has had a minimal impact on indicators of economic efficiency of production since 2007. For example, according to the regional statistical offices of the Murmansk and Arkhangelsk oblasts and the Republic of Karelia, in 2018, the total fees for the use of biological resources amounted to 0.35% of the cost of the economic turnover of fishing and fish farming in the Northern Basin. This feature — the absence of a significant fee for the use of resources — distinguishes it from a number of other industries [4, Endovitskiy D.A.]. "It can be as-

¹ Nauchnye i prikladnye osnovy ustoychivogo razvitiya i modernizatsii morekhozyaystvennoy deyatelnosti v zapadnoy chasti arkticheskoy zony Rossiyskoy Federatsii: otchet o NIR (promezhut.): 0226-2019-0022 [Scientific and applied foundations for sustainable development and modernization of maritime activities in the western part of the Arctic zone of the Russian Federation: research report (interim): 0226-2019-0022] / Institute of Economic Problems of the Kola Scientific Center of the Russian Academy of Sciences; scientific adv. Vasilyev A.M.; resp. performer: Vasilyev A.M., Vopilovskiy S.S., Fadeev A.M. et al. Apatity, 2020, 128 p.

sumed that the extremely high profitability of fishing, as well as its other non-typical financial indicators, are largely ensured by the use of natural rent by mining enterprises" [5, Kuzin V.I.]. The actual average level of profitability in the fishing industry of the Murmansk Oblast in 2013 was 37.0% (2013 was the last period with a relatively "stable" Russian currency). A considerable part of the named level of profitability, along with preferences, was provided by the presence of natural rent, which, according to our researches, makes ~35% of the level of economic turnover [6, Vasiliev A.M., p. 73].

The above factors were supplemented by the increase in export prices for fish and their conversion into rubles at the devalued exchange rate since 2015. According to Rosstat, the share of export income in the total revenue of fisheries organizations in 2017 was 77.0%². The weighted average profitability of sales in fisheries for the three analyzed regions increased to 67.3%^{3,4}. At the same time, it is important to note that mining companies used increased export prices in the domestic market, which should not have been done in the situation described above. This was stated by the President of the Russian Federation V.V. Putin in a speech at a meeting of the Presidium of the State Council on November 19, 2015. "However, this has not reached the owners of fishing companies. They continued to use the high profitability in fisheries for the benefit of a narrow circle of bioresource users and to raise the prices of fish products"⁵. As a result, first-hand prices for the main species of Arctic fish in the North-West at the end of 2018, compared to the end of 2013, increased: for cod — up to 295 rubles/kg (3.2 times), for haddock — up to 210 rubles/kg (1.9 times), for mackerel — up to 125 rubles/kg (2.1 times) and for herring — up to 70 rubles/kg (1.4 times)⁶. The profitability of fishing in the Northern Basin was 77.5%, and 15 mining enterprises had a profitability level of over 100.0%.

Some experts believe that one of the factors for using unreasonably high wholesale prices for fish on the domestic market is the fact that fishermen do not need it (the market) for currency-intensive fish production, such as cod, haddock, and other bottom species. For example, B.I. Pokrovsky and co-authors note that it "does not have the necessary degree of competition, and supplies are carried out according to the residual principle" [7, Pokrovsky B.I.]. The negative impact of excessive exports on the domestic market is also noted by A.G. Mnatsakanyan and A.G. Kharin [3]. This statement applies to the markets of the North-West of Russia and other Russian

² Finansy Rossii. 2018: Stat.sb. [Russian finances. 2018: Stat.col.] / Rosstat. Moscow, 2018, 439 p.

³ Rybokhozyaystvennaya deyatel'nost' v Murmanskoy oblasti [Fisheries activities in the Murmansk Oblast] / Federal State Statistics Service, Territorial body of the Federal State Statistics Service for the Murmansk Oblast. Murmanskstat, 2019, 48 p.

⁴ According to the Territorial body of the Federal State Statistics Service for the Arkhangelsk Oblast and the Republic of Karelia, 2013, 2018.

⁵ Korotaev I. Za lakomyy kusochek rybnoy otrasli nachalas' neshutochnaya bor'ba [A serious struggle began for a tidbit of the fish industry]. URL: <https://konkurent.ru/article/18819> (accessed 15 December 2021).

⁶ Rybnye ryady. Obzor situatsii na rynke ryby 29 dekabrya 2018 g. [Fish lines. Overview of the situation on the fish market December 29, 2018]. URL: <http://www.nfr.ru/media/files/monitoring/monitoring.29.12.2018.pdf> (accessed 17 December 2021).

regions, where Arctic fishermen supply fish products, primarily, since they sell fish abroad to a greater extent than fishermen of other basins — an average of 71.0% and over 90.0% for cod ⁷.

The increase in wholesale prices for Arctic fish species served as the basis for the increase in retail prices. Table 1 shows the average consumer (retail) prices by type of processing in the three main regions of the North-West at the end of 2013 and 2018.

Table 1 shows that prices for all types of fish products have risen sharply. Thus, for the most purchased fish — frozen cut fish (excluding salmon) — the price increase in 2018, compared to 2013, amounted to 241.8% and 203.7% in the Murmansk Oblast, 233.5% in the Arkhangelsk Oblast and 181.5% in the Republic of Karelia. For fillets, the rates were 272.3% and 243.1% in the Murmansk Oblast, 219.9% in the Arkhangelsk Oblast, and 166.9% in the Republic of Karelia. As for salted herring, the Murmansk Oblast had 263.9% and 189.0%, while the Arkhangelsk Oblast had 195.9% and the Republic of Karelia had 173.6%. The rest of the range of fish products has similar results.

The increase in prices for fish products caused an adequate response from consumers. The purchasing power of the population of the Murmansk Oblast, compared with the level of 2013, decreased by almost 40%, in the Republic of Karelia — by 35%.

Fish consumption decreased to the greatest extent — by 19% — in the Murmansk Oblast, by 4% in the Arkhangelsk Oblast, and even slightly increased in Karelia. The given results, in our opinion, can be explained by the reorientation of the population to the purchase of blue whiting and pollock, which are much cheaper than fish caught in the Western Arctic waters. In addition, the above results of the consumption of fish products are associated with the great development of fishery in the inland waters of the Arkhangelsk Oblast and Karelia. Despite the reduction of fish consumption and the purchase of a cheap assortment of products, in comparison with cod and haddock, its cost in all regions has increased by a third or more.

Table 1

Average consumer prices for fish products at the end of the year, rub/kg ^{8,9}

Product	Murmansk Oblast			Arkhangelsk Oblast			Republic of Karelia		
	2013	2018	Ratio of 2018 to 2013, %	2013	2018	Ratio of 2018 to 2013, %	2013	2018	Ratio of 2018 to 2013, %

⁷ Nauchnye i prikladnye osnovy ustoychivogo razvitiya i modernizatsii morekhozyaystvennoy deyatel'nosti v zapadnoy chasti arkticheskoy zony Rossiyskoy Federatsii: otchet o NIR (promezhut.): 0226-2019-0022 [Scientific and applied foundations for sustainable development and modernization of maritime activities in the western part of the Arctic zone of the Russian Federation: research report (interim): 0226-2019-0022] / Institute of Economic Problems of the Kola Scientific Center of the Russian Academy of Sciences; scientific adv. Vasilyev A.M.; resp. performer: Vasilyev A.M., Vopilovskiy S.S., Fadeev A.M. et al. Apatity, 2020, 128 p.

⁸ Rybokhozyaystvennaya deyatel'nost' v Murmanskoy oblasti [Fisheries activities in the Murmansk Oblast] / Federal State Statistics Service, Territorial body of the Federal State Statistics Service for the Murmansk Oblast. Murmanskstat, 2019, 48 p.

⁹ According to the Territorial body of the Federal State Statistics Service for the Arkhangelsk Oblast and the Republic of Karelia, 2013, 2018.

1	2	3	4	5	6	7	8	9	10
Live and chilled fish	122.3	284.6	232.7	n/d	n/d	-	172.8	329.4	190.6
Salted, marinated and smoked fish	276.9	491.2	177.4	195.6	345.8	176.8	326	488.9	144.9
Salmon caviar, domestic	3024.1	4363.1	144.3	2607.2	3766.8	144.5	3836.4	3728.0	131.4
Frozen cut fish, except for salmon species	147.3	298.6	203.7	112.8	263.4	233.5	134.4	243.9	181.5
Frozen uncut fish	65.7	131.4	200.0	86.7	148.6	170.7	60.0	122.5	204.2
Cut salmon	308.3	728.2	236.2	382.6	816.8	213.5	...	527.1	-
Fillet	177.22	430.8	243.1	175.6	386.2	219.9	193.5	322.9	166.9
Salted herring	123.0	232.5	189.0	107.0	209.6	195.9	123.0	213.5	173.6
Salted herring fillet	296.1	427.4	144.3	268.7	402.2	149.7	249.7	405.9	162.5
Canned naturally and with oil	59.8	110.9	185.5	57.2	113.9	199.1	57.8	124.8	215.9
Canned in tomato sauce	45.0	82.0	182.2	40.9	66.3	162.1	35.8	78.0	218.5
Preserves	47.6	113.7	-	-	137.3	...	-

The President of Russia V.V. Putin signed Instructions on the issues discussed at the meeting of the Presidium of the State Council on November 19, 2015 to government agencies, which are of a market nature ¹⁰.

Thus, in order to reduce prices for fish products, instructions were sent to the Government of the Russian Federation to improve statistical accounting in the fishery complex of the Russian Federation (p. 1e), to form a unified system for managing and coordinating the activities of state bodies and organizations engaged in management, storage, transportation and sale of fish products, to improve the delimitation of powers between the state authorities of the Russian Federation, the state authorities of the constituent entities of the Russian Federation and local governments in the field of fisheries (p. 2a), to carry out activities aimed at identifying and suppressing cartel collusion in the field of the fishery complex, including in relation to specialized associations, as well as in the field of trade in ABR (p. 5). The Federal Antimonopoly Service and the Federal Tax Service have been instructed to analyze the formation of the wholesale price of fish products, the margins of intermediaries and retailers, as well as the costs of transport and logistics services (p. 6).

The above data on the prices of Arctic fish products shows that the measures taken by the authorities at various levels to implement the decisions made at the meeting of the Presidium of the State Council on 19 November, 2015 have not yet achieved the desired result, as they are mostly local in nature.

Thus, the improvement of statistical accounting has so far been reduced to the fact that the data published by the Territorial bodies of the state statistics of the Murmansk, Arkhangelsk oblasts and the Republic of Karelia no longer provide information on salmon mariculture, as well

¹⁰ Perechen' porucheniy Prezidenta RF po itogam zasedaniya prezidiuma Gossoveta po razvitiyu rybokhozyaystvennogo kompleksa 19 noyabrya 2015 g. [List of instructions of the President of the Russian Federation following the meeting of the Presidium of the State Council on the development of the fishery complex on November 19, 2015]. URL: <http://www.kremlin.ru/acts/assignments/orders/50665> (accessed 19 December 2021).

as on the export of fish and crustaceans, mollusks and other aquatic invertebrates in natural terms. In this regard, it is impossible to conduct an analysis on the efficiency of growing salmon fish and exporting fish products. In other countries, for example, in Norway, such issues are resolved by contacting the relevant authority issuing the document, while in Russia, it is necessary to apply to higher authorities, and this information is not always possible to obtain.

In accordance with the instruction to improve the division of powers in the field of fishing, it was decided to increase the quotas of bioresources for participants in coastal fishing by 20% in 2017. It was supposed to improve the provision and financial situation of coastal consumers of chilled fish. However, due to insufficient fish volumes and lack of competition, prices for coastal fishery products are not much lower than frozen products. A radical solution would be to switch to trade at contractual prices, taking into account the profitability of the main consumers of chilled fish — coastal enterprises, as is done in most fishing countries located on the shores of the Atlantic [8, Sogn-Grundvåg G.; 9, McEvoy D.M.].

The government and other competent authorities of the country are trying to develop measures that exclude the accounting of export prices by producers of products when trading on the domestic market, but so far no general solution for the country has been found. The introduction of higher export duties and various temporary arrangements have been used to fill the domestic market.

For example, in the Murmansk Oblast, there has been fish trade under the program "Our Fish" since 2019. The project is being implemented within the framework of an agreement on cooperation between the fish industry and retail chains. The goal is to provide residents of the Murmansk Oblast with high-quality fish products at reduced prices.

According to the Ministry of Fisheries and Agriculture of the Murmansk Oblast, the project covers 26 outlets in 13 cities of the region, as well as weekly fish fair, which is held on Saturdays in Forum shopping center in Murmansk. It presents the most popular fish — cod, haddock, flounder, ruff, catfish, perch, halibut, whitefish, pike, burbot and others, mostly chilled, as well as non-traditional sea delicacies. Products are sold at prices 10-15% below the usual selling prices of fishermen, and large queues line up for them. As far as we know, similar markets are organized in other coastal regions of the country.

The main tool in the fight against monopoly in the field of fisheries is the Federal Law of July 26, 2006 No. 135-FZ "On Protection of Competition". This Law is of a general nature. It does not contain specific provisions concerning fisheries as some states do. In Iceland, for example, a maximum share of the total allowable catch (TAC) of one participant in the fishery is set at 12.0%. It also specifies the possible catch limit for each species of fish. Such criteria are more convenient to avoid monopoly in fisheries ¹¹.

¹¹ Korolev Yu. Zalog kvot i uroki krizisa dlya rybakov Islandii [Pledge of quotas and lessons of the crisis for fishermen in Iceland]. URL: <https://fishnews.ru/rubric/lichnoe-mnenie/5748> (accessed 18 December 2021).

In accordance with this law, the Federal Antimonopoly Service of Russia in 2012 found the Pollack Harvesters Association and its 26 member companies guilty of a cartel conspiracy to raise prices in the domestic market by delaying the supply of fish products and affiliation with the Hong Kong Pacific Andes fish holding. This FAS decision was positively assessed by three judicial instances. As a result of court proceedings, the guilty legal entities were fined 120 million rubles.

There is only one large fishing company in the Northern Basin that can be suspected of monopoly — the vertically integrated holding Norebo. The Norebo group includes 16 fishing companies, including 9 companies in the Northern Basin: Alternativa LLC, Karat LLC, Karelian Seafood LLC, Rybprominvest LLC, Sogra LLC, Strelets LLC, Taurus LLC, Eridan LLC, Murmansk Trawl Fleet LLC and PJSC. The holding includes 2 modern fish processing plants, a logistics company, a cargo terminal and trade enterprises in Russia and abroad. The company produces more than half of the volume of fillets produced by the enterprises of the Northern Basin. According to our calculations, the holding's revenue for 2021 amounted to ~1.0 billion US dollars¹².

Norebo Holding, like most fishing enterprises in the Northern Basin, supports the supply of cod to the domestic market in minimal volumes and at high prices.

One of the authors considering the issues of structure and competition in classical economic theory is Krugman P. [10]. To study competition in industries, Hannah L. and Kay J.A. developed a concentration index determined by the formula [11]:

$$CR_k = \sum_{i=1}^k \frac{Q_i}{Q_{\Sigma}}$$

where Q_i — the volume of output of the studied products of the i -th manufacturer; Q_{Σ} — the total volume of production of the studied products.

This indicator is equal to 0 for a perfect market, and it is 1 for a monopoly market. The higher the value of the concentration index, the less competitive the market is. If the value of CR_k is less than 45%, the market is considered unconcentrated, if CR_k is in the range from 45% to 70%, it is considered moderately concentrated, and if CR_k is more than 70%, it is considered highly concentrated.

The calculation of fishing concentration indices in the Northern Basin, based on the availability of quotas for 2021 for fishing the most valuable object — cod — at the Norebo Holding showed an index value of 30.6%, and for the three largest enterprises — Rybprominvest JSC, Alternativa JSC and Murmansk Trawl Fleet JSC — 13.0%. Thus, theoretically, fishing in the Arctic should be considered non-concentrated. At the same time, the calculation made for the sum of all fishing resources for 2021 shows that CR_3 will be in the range from 45% to 75% — the fishery is moderately concentrated. However, it should not be considered as such, since 80.0 thousand tons

¹² Kostyrev A. «Norebo» popolnyaet seti ["Norebo" replenishes the network]. URL: <https://www.kommersant.ru/doc/5087103> (accessed 18 December 2021).

of quotas of the Murmansk trawl fleet are located in a separate fishing area — the Central Atlantic. As a rule, fish products from this region do not enter Russia.

In our opinion, Russian market is necessary for the fishermen of the Northern basin only to sell fish, which can be sold there at a higher price than in European markets. These are herring, blue whiting, polar cod, capelin and blue catfish. They supply the rest of the fish products in minimal quantities, satisfying the demands of the authorities rather than the population. In order to increase supplies to the Russian market to the volumes recommended by the Food Security Doctrine, they need to be stimulated.

Fulfilling the instructions of the President of the Russian Federation V.V. Putin on the analysis of the formation of the wholesale price for fish products, the margins of intermediaries and retail trade, the FAS and the Federal Tax Service prepared a report on measures to limit prices for fish products. The report is not publicly available. Based on the published data, it can be concluded that, according to the FAS, the largest increase in fish prices occurs in the area between the selling prices of producers and the purchasing prices of stores. Development of mariculture is also considered an effective measure in the struggle against price growth by the FAS¹³.

In 2011, the Antimonopoly Service investigated the structure of retail prices for fish and found that the share of fishermen in the price of most fish species ranges from 10.0% to 50.0%¹⁴. In their opinion, intermediaries between fishermen and retailers had a great influence on the price structure. It can be assumed that this is also their viewpoint in the report to the President of Russia. There are no publications on the topic of combating this.

It is known that the producers' selling prices of fish products stored in industrial refrigerators can change even without moving them. Any citizen can purchase fish products and sell them to anyone. These actions may take place several times before the product enters the distribution network.

In order to reduce such manipulations in the Northern Basin, in our opinion, it is necessary to have a sales organization. According to many owners of mining enterprises, it should be private or public-private and sell fish both abroad and on the domestic market through electronic trading.

It is not advisable to propose to solve the problems of the fish industry in food safety via fish farming, as proposed by the FAS, due to low volumes of commodity production, low quality products and the same high prices. Owners of fish farming companies also monitor changes in fish prices in Russia and abroad. For example, the head of the project "Fish Showcases", "VkusVill" Sychev R.V. said in an interview with Rossiyskaya Gazeta: "Last year, the euro rose sharply. And, for example, Murmansk salmon became more expensive than it was supplied to us in spring and at the end of summer. It has risen in price quite seriously. I don't see any reason for this price in-

¹³ FAS proanalizirovala rybnye tseny [FAS analyzed fish prices]. URL: <https://fishnews.ru/news/29136> (accessed 20 December 2021).

¹⁴ FAS napravila prezidentu Rossii doklad o merakh, napravlennykh na ogranichenie rosta tsen na rybu [FAS sent a report to the President of Russia on measures aimed at limiting the rise in fish prices]. URL: <https://fas.gov.ru/news/2061> (accessed 20 December 2021).

crease. Obviously, manufacturers also have their ear to the ground. They understand that if everyone took salmon for 1000 rubles per kilogram, then there is no need to sell it for 700 rubles. Although it would seem that our fish should be much cheaper, since we are not tied to the exchange rate and customs duties. But it turns out that our manufacturers are guided by the global price tag”¹⁵.

It should be reminded that, in accordance with the Doctrine of Food Security 2020, in order to ensure the consumption of 22 kg of whole fish by the population, a catch of ~3230.0 thousand tons is required, including 2750 thousand tons (85.0%) of fish of domestic production. Fish farming in 2021 amounted to 273.5 thousand tons, including 97.1 thousand tons in the Murmansk Oblast and Karelia. Consequently, the whole country’s fish production is now 9.9% of the recommended by the Doctrine volumes of Russian fish consumption¹⁶. Such small volumes cannot significantly affect prices.

The Murmansk and Arkhangelsk oblasts and the Republic of Karelia are currently home to 2.469.000 people. Therefore, farmed fish provides 21% of the volume recommended by the Doctrine¹⁷. Prices for farmed salmon are slightly lower than those for wild salmon. However, it must be remembered that it is a genetically modified product and can cause harm when eating.

At the State Council “On the development of the fishery complex” in November 2015, the President of Russia placed the main responsibility for rising prices for fish products and strengthening the country’s food security on the fishing sector, recalling that the state has created preferential conditions for fishing and the high results achieved in fisheries should be extended to the population of the country. However, the words of the President that “the main task of the fishery complex is the use of national biological resources in the interests of the whole society” have not been realized¹⁸.

The FAS considers the lack of competition in allocating the fishermen with the quota of aquatic resources based on the so-called “historic” system as one of the reasons why fishermen fail to fulfill their moral obligations to the country and society¹⁹. The FAS expressed its detailed opinion on this topic in the report “On the state of competition in the Russian Federation”. It claims that “the use of auctions will lead to the emergence of new market participants and a cor-

¹⁵ Mikhaylov A. Pochemu rossiyanе stali men'she est' ryby [Why do Russians eat less fish]. Rossiyskaya gazeta – Ekonomika Severo–Zapada, 2021, no. 161 (8512). URL: <https://rg.ru/2021/07/20/reg-szfo/pochemu-rossiiane-stali-menshe-est-ryby.html> (accessed 20 December 2021).

¹⁶ Rybnyy Kur'er-Profi: ezhenedel'nyy byulleten' o mezhdunarodnom rybnom biznese [Fish Courier Profi: A weekly newsletter on the international fish business]. 2021, no. 44 (272), November 10.

¹⁷ Population of subjects of the Russian Federation. URL: https://ru.wikipedia.org/wiki/%D0%9D%D0%B0%D1%81%D0%B5%D0%BB%D0%B5%D0%BD%D0%B8%D0%B5_%D1%81%D1%83%D0%B1%D1%8A%D0%B5%D0%BA%D1%82%D0%BE%D0%B2_%D0%A0%D0%BE%D1%81%D1%81%D0%B8%D0%B9%D1%81%D0%BA%D0%BE%D0%B9_%D0%A4%D0%B5%D0%B4%D0%B5%D1%80%D0%B0%D1%86%D0%B8%D0%B8 (accessed 20.12.2021).

¹⁸ Korotaev I. Za lakomy kusocek rybnoy otrasli nachalas' neshutochnaya bor'ba [A serious struggle began for a tid-bit of the fish industry]. URL: <https://konkurent.ru/article/18819> (accessed 15 December 2021).

¹⁹ FAS proanalizirovala rybnye tseny [FAS analyzed fish prices]. URL: <https://fishnews.ru/news/29136> (accessed 20 December 2021).

responding decrease in the level of concentration of large groups, which indirectly will lead to creation of effective competitive environment, and also will contribute to reduction of prices for fish production for final consumers”²⁰.

This FAS statement refers to competition for the right to own quotas, and not to the production of fish products at affordable prices. Competition for the acquisition of quotas has always existed. Companies are used to enter the fishery, according to the Fisheries Act, to acquire companies. According to the law, from 2005 to 2017, ~240 billion rubles were allocated for the purchase of businesses. Auctions will increase the presence of large companies in the fisheries sector, as small and medium-sized businesses are financially constrained²¹.

Auction experience 2001–2003 showed that the fish companies, which paid for fish quotas, included those amounts in their costs, which resulted in higher prices for fish products and lower efficiency of fishing.

It should be remembered that the auctions of 2001–2003 led to the stagnation of the fish industry. At the meeting of the Presidium of the State Council “On the development of the fishery complex”, the following results of those auctions were given: Profit of the industry in 2001 fell 9-fold in comparison to 2000, in 2003 — 18 billion rubles. Accounts payable increased from 37.7 billion rubles in 1999 to 70 billion rubles in 2004, reaching 82% of the cost of production²².

In accordance with the “Law on Fisheries ...”, new fishery participants can acquire biological resources in the following ways: buying quotas for newly introduced biological resources at auctions, shares of quotas taken away from dishonest users, quotas of bankrupt enterprises, enterprises under foreign control etc. However, it should be said that any purchase of quotas leads to an increase in the cost of production and, consequently, to an increase in prices for fish products. The chairman of the board of directors of the Fishnews media holding, E. Klimov said at the meeting of industry associations and fish companies that they discuss high prices for fish: “The task of supplying Russians with cheap fish or providing high-quality food is not worth it. If business sells resources at auctions, then any lowering of prices is out of the question”²³. The majority of scientists and fishery specialists agree with this formulation of the issue of providing fishermen

²⁰ Rybopromyshlenniki otvetili na doklad FAS [Fishermen responded to the FAS report]. URL: <https://finance.rambler.ru/other/40678745-rybopromyshlenniki-otvetili-na-doklad-fas/> (accessed 20 December 2021).

²¹ Perspektivy istoricheskogo printsipa raspredeleniya kvot obsudili na sovместnom zasedanii obshchestvennykh sovetov pri FAS i Rosrybolovstve [Prospects for the historical principle of quota distribution were discussed at a joint meeting of public councils under the FAS and the Federal Agency for Fishery]. URL: https://www.fishnet.ru/news/novosti_otrasli/perspektivy-istoricheskogo-principa-raspredeleniya-kvot-obsudili-na-sovместnom-zasedanii-obshchestvennykh-sovetov-pri-fas-i-rosrybolovstve/ (accessed 20 December 2021).

²² O razvitiy rybokhozyaystvennogo kompleksa Rossiyskoy Federatsii: rabochaya gruppa prezidiuma Gosudarstvennogo soveta [On the development of the fishery complex of the Russian Federation: a working group of the Presidium of the State Council]. URL: http://vniro.ru/files/Gossovet_doklad.pdf (accessed 20 December 2021).

²³ Rybnyy Kur'er-Profi: ezhenedel'nyy byulleten' o mezhdunarodnom rybnom biznese [Fish Courier Profi: A weekly newsletter on the international fish business]. 2021, No. 29 (857), June 28. URL: <https://www.fishnet.ru/issues/rk-profi/857.html> (accessed 20 December 2021).

with bioresources for fishing. Therefore, we suggest transferring the above mentioned ABR free of charge to the most cost-effective enterprises supplying fish products to the domestic market.

Conducting auctions for biological resources every 3–5 years, as proposed by the FAS, will lead to curtailment of the investment policy of mining companies, since the payback of vessels at some fishing sites is higher than these terms.

Conclusion

The research shows that fisheries were responsible for the significant increase of fish prices in the Northern Basin in 2014–2015. Among the factors responsible for this situation, the main ones are excessive exports and the failure of fishermen to take into account the low income of Russians compared to Europeans, where the bulk of fish products were supplied. As a consequence, the Russian domestic market was impoverished, both in terms of the volume and variety of products supplied.

The state of marine bioresources and available fishery and coastal fish-processing complexes allow high production and socio-economic results. However, for this purpose, it is necessary to create the norms stimulating calls of trawlers to Russian ports, unloading of fish products there and sale of products on the territory of Russia. In this case, it would be advisable to substantially increase and differentiate fees for ABR when exporting products and supplying them to Russia, as well as to link the allocation of some bioresources quotas for fishing with the obligations to implement the Food Security Doctrine. Currently, the Food Security Doctrine approved by the President of Russia is not systematically implemented due to excessive exports.

The access of economic entities to the exploitation of aquaculture resources in most (if not all) countries is linked to the unloading and sale of fish products, firstly on the domestic market, and then to their export with the permission of customs and other authorities established by the authorities. Russia is probably the only state that allows uncontrolled export of fish directly from the sea. The absence of regular visits of fishing vessels in Russian ports is one of the reasons for the decrease in export prices of fish production and its increase in the domestic market. The coastal infrastructure and enterprises related to fish and seafood processing, maintenance and repair of the fleet incur huge economic losses. Without entering Russian ports, ships leave abroad up to 7 billion rubles per year for maintenance and repair [12, Vasiliev A.M.]. Export of products directly from the sea and dosed deliveries to the domestic market contribute to maintaining high wholesale prices for fish in the domestic market.

Numerous fish brokers and retailers contribute to increase in prices for fish products. Actions of some authorities, encouraging fish export without proper justification, also affected the provision of the domestic market with fish products.

There are no proposals to reduce the influence of intermediaries on prices in the published information about the FAS report to the President of Russia on high prices for fish products. In our opinion, a special organization in the form of a distribution center should deal with the supply of

fish products to the domestic market. Creation of the fish market is planned in Murmansk. It is advisable to include the functioning of the Center for the electronic sale of fish products and their delivery to consumers in its structure.

It is pointed out in the introduction of this article that officials and most of the workers in the fish industry blame trade for high retail prices of fish products. For example, the chairman of the Fish Union, A. Panin, claims that retail chains markup fish from 63% to 85%²⁴. The President of the All-Russian Association of Fisheries and Exporters, G. Zverev, stated at a quarterly (2021) briefing, that store markups double the prices for caviar and red fish²⁵. The results of a study by the Centre for Social Design Platforma show that “the long chain from catching fish to its appearance on shop shelves in packaging leads to a 2.5–3.0-fold increase in prices”²⁶.

Research by the Institute of Economic Problems of the Kola Scientific Centre of the Russian Academy of Sciences, carried out in the retail and entertainment center “Okay” and the “Euroros” shop in Murmansk in 2010–2011, showed that the trade markup ranged from 24.0% to 200.0%, depending on the type of fish and products²⁷.

The share of fishermen in the retail price in 2013 was about 30.0%²⁸. After the fishermen increased fish prices in 2014–2015, it rose to 85.0%. However, in the following years, the share of fishermen in the retail price decreased and was 51.0% in 2018²⁹. Currently, there are no effective market measures to limit retailers’ markups, except for limiting them by law or by decree of the Government of the Russian Federation based on the results of a relevant scientific study.

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²⁴ Eksperty rasskazali, pochemu ryba v magazinakh vdvoe dorozhe, chem u rybaka [Experts told why fish in stores is twice as expensive as that of a fisherman]. URL: <https://fishretail.ru/news/eksperti-rasskazali-pochemu-ryba-v-magazinah-426662> (accessed 15 December 2021).

²⁵ Rost tsen na produkty: chto budet delat' pravitel'stvo i pochemu rastet stoimost' ryby v magazinakh [Rising food prices: what the government will do and why the cost of fish in stores is growing]. URL: <https://www.fishnet.ru/news/rynok/rost-cen-na-produkty-chto-budet-delat-pravitelstvo-i-pochemu-rastet-stoimost-ryby-v-magazinah/> (accessed 15 December 2021).

²⁶ Mikhaylov A. Pochemu rossiyanе stali men'she est' ryby [Why do Russians eat less fish]. *Rossiyskaya gazeta – Ekonomika Severo–Zapada*, 2021, no. 161 (8512). URL: <https://rg.ru/2021/07/20/reg-szfo/pochemu-rossiiane-stali-menshe-est-ryby.html> (accessed 20 December 2021).

²⁷ Kontseptual'nye napravleniya innovatsionnogo razvitiya morekhozyaystvennogo kompleksa Evropeyskogo Severa Rossii: otchet o NIR (promezhut.): 3-10-4002 [Conceptual directions of innovative development of the marine economic complex of the European North of Russia: report on research (interim): 3-10-4002] / Institute of Economic Problems of the Kola Scientific Center of the Russian Academy of Sciences; scientific adv. Vasilyev A.M.; resp. performer: Vasilyev A.M., Kuranov Yu.F., Fadeev A.M. et al. *Apatity*, 2011, 97 p.

²⁸ O razvitii rybokhozyaystvennogo kompleksa Rossiyskoy Federatsii: rabochaya gruppa prezidiuma Gosudarstvennogo soveta [On the development of the fishery complex of the Russian Federation: a working group of the Presidium of the State Council]. URL: http://vniro.ru/files/Gossovet_doklad.pdf (accessed 20 December 2021).

²⁹ Nauchnye i prikladnye osnovy ustoychivogo razvitiya i modernizatsii morekhozyaystvennoy deyatel'nosti v zapadnoy chasti arkticheskoy zony Rossiyskoy Federatsii: otchet o NIR (promezhut.): 0226-2019-0022 [Scientific and applied foundations for sustainable development and modernization of maritime activities in the western part of the Arctic zone of the Russian Federation: research report (interim): 0226-2018-0022] / Institute of Economic Problems of the Kola Scientific Center of the Russian Academy of Sciences; scientific adv. Vasilyev A.M.; resp. performer: Vasilyev A.M., Kuranov Yu.F., Fadeev A.M. et al. *Apatity*, 2018, 126 p.

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