New Doctrine of Food Security in Russia: Forecast for its Implementation in the Fisheries

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Abstract. An analysis of the implementation of the Doctrine of Food Security of the Russian Federation until 2020 in the field of fisheries is carried out. It was found that the actual consumption of fish in whole form from Russian sources on average for the period under review amounted to about 60% of the threshold value of 17.6 kg. The economic availability of fish products on average in Russia decreased by 14.4%. It was revealed that at the same time, the population began to buy more cheap breeds of fish in their unfinished form. Thus, the quality of fish consumption has also decreased. It was established that the main reasons for the decrease in fish consumption and its economic accessibility to the population were a decrease in the ruble exchange rate against the US dollar, an increase in fish exports and a reduction in its supply to the domestic market. Currently, fishery has 2 conflicting tasks: firstly, to ensure the consumption of fish by the population in the amount of 18.7 kg at the expense of Russian sources and, therefore, to limit the export of fish. Secondly, to increase export revenue by 1.5 times by 2024 (from 5.174 billion US dollars to 8 billion US dollars). Fishing organizations are interested in increasing fish exports and it is unlikely that Rosrybolovstvo will limit it. At the same time, reserves for increasing the value of exports due to the deepening of fish cutting are insignificant. It follows that the new Doctrine, as well as the previous one, will not be fulfilled.

1. Introduction
Under the current geopolitics, the importance of the independence and independence of the Russian economy from the world community has grown and continues to grow.

The level of food supply to the Russian Federation in the current geopolitical situation, in our opinion, can be considered the most important macroeconomic indicator. It is important for ensuring national security and a decent standard of living for people and for the implementation of an appropriate demographic policy. In order to ensure an adequate and safe level of nutrition, an appropriate institutional base must be created, the country's branches developed, producing products - agriculture and fisheries, and appropriate technologies developed. To ensure public access to food products, their prices should be harmonized with income. To ensure the above conditions, the Russian Federation adopted and approved by Presidential Decree No. 120 of January 10, 2010, the Doctrine of Food Security of the Russian Federation, which, in particular, stipulates that 80% of the fish products consumed in the country should be of domestic production [1].

Abroad, a lot of attention is also paid to these problems, as can be seen from the article «Aquatic food security: insights into challenges and solutions from an analysis of interactions between fisheries, aquaculture, food safety, human health, fish and human welfare, economy and environment» [2]. The article presents a comprehensive assessment of the aquatic food system in the UK. It relates to the
adequacy of supplies of aquaculture products, fisheries and trade; security of supply, taking into account various factors; social, economic and environmental sustainability of production systems and supplies; system resilience to social, economic and environmental shocks.

2. Main part

The first doctrine of food security of the Russian Federation was approved on January 30, 2010 by Decree of the President of the Russian Federation No. 120 [1].

The doctrine and other documents of the Government of the Russian Federation establish standards of nutrition of the population with products that ensure the preservation of health, performance and life expectancy in accordance with its level in developed countries.

In particular, the annual rate of consumption of fish products for a healthy diet is provided in the amount of 18 kg. The product Range was not established, which hindered the development of technologies for deep cutting of fish and seafood. One of the tasks envisaged in this document was to reduce imports of fish products and raw materials to 20% of the total volume of production.

Among the indicators, the export of fish products was not named, while in the current conditions it significantly affects the amount of products remaining in the domestic market.

The third section presents “Risks and threats to food security of the Russian Federation”. We note the main ones that are of the greatest importance to fish products: foreign trade risks, low level of solvent demand of the population, insufficient level of development of the domestic market infrastructure, and a shortage of qualified personnel.

The Doctrine sets out "The main directions of state economic policy in the field of ensuring food security of the Russian Federation." The most important of them for the fishing industry, in our opinion, are: improving the welfare of the population, developing the transportation of fish products from the coastal regions of Russia producing fish products to the internal regions of the country. The necessity of using currently undeveloped aquatic biological resources, as well as the creation and use of modern technologies for the deep and complex processing of raw materials, methods of storage and transportation of fish products is ascertained.

In the field of foreign economic policy, the Doctrine spells out a sufficient number of measures that should ensure the consumption in the country of fish products in the recommended amounts produced from Russian catches. In particular, it refers to the need to regulate exports and to use protective measures against excessive imports.

In the field of production and turnover of fish products, a number of measures were envisaged that were not implemented in the study period (2010-2019). The most important of them, in our opinion, were:

a. stabilization of the price situation and the formation of pricing mechanisms based on indicative prices for the main types of products;

b. improvement of state trade policy, regulation of fish products markets, including procurement for state needs, ensuring the expansion of demand for domestic products.

The previous regulation on the consumption of finished fish products was changed in 2016. Currently, it is required to take into account the consumption of fish products in undivided form, which corresponds to the international methodology developed by the Food and agriculture organization of the United Nations (Order of the Minister of health No. 614 of August 19, 2016).

Resolution of the Federal state statistics service No. 283 of 20.04.2017 provided for recalculating the statistics of consumption of fish products in accordance with the new methodology starting from 2013. in the article, such a study was performed from 2013 to 2018 (table 1).

Catches of fish and seafood 2010-2018 allowed the consumption of fish products by the population in recommended volumes and to produce small amounts of its export.

The actual volume of exports per raw fish was 1.8 times higher than possible provided the Doctrine was implemented in 2010 and 1.6 times higher in 2018. Actual average per capita consumption of fish in whole form from Russian sources averaged over the period under review 10.0 kg, or 56.8% of the
Threshold determined by the 2010 Doctrine. Thus, the main goal of the Food Security Doctrine – to ensure the consumption of fish products in the amount of 22 kg per capita due to Russian catches - has not been achieved.

Table 1. The level of fish consumption in Russia [3-6]

| Indicators                                      | 2010    | 2013    | 2014    | 2015    | 2016    | 2017    | 2018    |
|------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|
| Catch, thousand tons                            | 4199.0  | 4511.6  | 4392.6  | 4492.5  | 4817.9  | 4955.2  | 5109.8  |
| Aimed at non-food purposes                      | 390.0   | 423.0   | 430.0   | 425.0   | 435.0   | 486.0   | 577.0   |
| Losses                                          | 23.0    | 36.0    | 40.0    | 41.0    | 42.0    | 44.0    | 46.0    |
| Potential volume of domestic fish for consumption, thousand tons | 3786.0  | 4052.6  | 3922.6  | 4026.5  | 4340.9  | 4425.9  | 4486.8  |
| Export                                          | 2293.2  | 2879.6  | 2416.0  | 2496.2  | 2665.7  | 2984.9  | 3112.0  |
| Fish for domestic consumption                    | 1492.8  | 1173.0  | 1506.6  | 1530.3  | 1675.2  | 1440.3  | 1374.8  |
| Import, thousand tons                            | 1942.8  | 2065.7  | 1907.3  | 1228.9  | 1103.0  | 1286.3  | 1398.4  |
| The balance of fish for domestic consumption, thousand tons | 3435.6  | 3238.7  | 3413.9  | 2759.2  | 2778.2  | 2726.6  | 2773.2  |
| The population of the country, thousand people   | 142866  | 143661  | 143972  | 146541  | 146645  | 146804  | 146880  |
| Actual average per capita fish consumption, kg   | 24.05   | 22.54   | 23.71   | 18.83   | 18.94   | 18.57   | 18.88   |
| Thesamewithoutimport                              | 10.4    | 8.2     | 10.5    | 10.4    | 11.4    | 9.8     | 9.4     |
| Possible export volume subject to the Doctrine and the absence of fish imports, thousand tons | 1272    | 1524    | 1389    | 1447    | 1760    | 1842    | 1902    |

Note: calculations made by the authors

The state of affairs in the fisheries was criticized by President Vladimir Putin at a meeting of the Presidium of the State Council on October 19, 2015. In his speech, the President repeatedly noted the lack of efficiency of the fisheries sector from the national economic point of view, including insufficient supplies of fish products to the Russian market, high prices for products, and the dependence of the fisheries sector on foreign partners.

The speech also spoke about the economic bias observed in the fisheries sector in favor of the private sector, while the interests of the Russian society and the state are being infringed. It was also mentioned that there is currently no reasonable balance between the interests of society, the state and fishing enterprises.

Based on the results of the meeting of the State Council Presidium on Fish, the President of Russia instructed the Federal Antimonopoly Service of Russia and the Federal Tax Service of Russia to analyze the formation of wholesale prices for fish products, markups of intermediaries and retail trade. As a result of the analysis, the FAS sent a report to the President of Russia on measures aimed at limiting the rise in fish prices [7].

The report, in our opinion, is more like an unsubscribe. In it, the main reason for high prices is the lack of fish farming, which should become an alternative to wild fish catches. But with such recommendations, you can leave the country without bread, saying that this happened due to insufficient cultivation of rye, and wheat was sold abroad for granted.

Above in the article it is shown that one of the reasons for the insufficient supply of fish to the domestic market is excessively large volumes of export. In turn, the lack of goods in the market leads to higher prices. As you know, the regulation of foreign economic relations is the task of the state. This is also recorded in the Food Security Doctrine. For these purposes, there is a law «On the basis of state regulation of foreign economic activity», containing tariff and non-tariff regulation measures recognized by the WTO [8].
In addition, the FAS considers intermediaries in the sale of products (5 stages) and retail trade as the culprits of high fish prices. This has long been known, but no action has been taken. We believe that in connection with these factors, the adoption of legislative measures to limit premiums is very relevant. In particular, the keynote speaker at the State Council O. Kozhemyako spoke about this, in particular. Also, in an interview with Japanese scientists who visited the Association of Coastal Fisheries and Farmers Association in 2019, the authors of this article revealed that in Japan, retail fish prices cannot increase, compared to wholesale prices, by more than 5-8%, if no work was done to finalize it.

The head of the Federal Agency for Fishery, IlyaShestakov, in an interview also said that he was counting on the assistance of the Federal Antimonopoly Service in regulating prices and that the solution to the problem was in trade [9].

However, it should be noted that the initiators of the increase in retail for fish products in 2015 were fishermen. As a result of the depreciation of the ruble against the US dollar, wholesale prices for cod during 2014 were more than doubled. For other species of fish of the Atlantic and Pacific oceans, they increased to a lesser extent [10].

A significant increase in wholesale prices for fish products was the main reason for the change in the structure of retail prices. So, according to the working group that was preparing the documents for the meeting of the State Council in 2015, the Russian population spent 527 billion rubles in 2014 on the purchase of fish. (4.3% of the funds for the purchase of food) [11]. The total value of fish products produced in Russia, according to Form No. 1-P (fish), amounted to 200.4 billion rubles. [12]. As a result, the retail sales value was 2.6 times higher than the value of Russian first-presentation products. In 2018, the cost of production amounted to 671.4 billion rubles, and the population bought fish in the amount of 814.1 billion rubles. (7.2% of the funds for the purchase of products) [13, author’s calculations]. Consequently, the retail price in 2018 was only 1.21 times higher than the cost of first-presentation products. The production of fish products in Russia amounted to 4249.7 thousand tons [14]. Thus, the wholesale price is 158.0 thousand rubles. (671446094 thousand tons / 4249.7 thousand tons). The volume of the domestic market amounted to 2612.3 thousand tons (4249.7 thousand tons - export 2236.4 thousand tons + imports 599.0 thousand tons). Consequently, the retail price of fish products in 2018 amounted to 311.649 rubles / kg (814.1 billion rubles / 2612.3 thousand tons). Compared to 2014, producer prices rose 2.96 times (1580 / 53.4), and retail prices rose 1.77 (311.6 / 176.3).

According to the studies of the Working Group, until 2015, the wholesale price in the retail structure was about 30% [11]. Currently - 50.7% (158 / 311.6). Progress in reducing retail margins has been observed, but is negligible. In addition, it should be noted that the change in the price structure was achieved due to the outstripping growth of wholesale prices, which is not advisable. Legislative restrictions are required.

In continuation of the Food Security Doctrine in force in 2010-2019, the President approved a new text on December 27, 2019. It also consists of 5 sections as the previous one. Their content basically coincides with the previous text [15].

The relative novelty of the text of the Doctrine is the need to calculate the indicator of food independence (level of self-sufficiency). The resolution of the Federal State Statistics Service of December 25, 2006 (as amended on January 21, 2013) approved guidelines for determining the level of self-sufficiency of the country and constituent entities of the Russian Federation with basic food products.

In general, the algorithm for calculating the coefficient of self-sufficiency can be represented by the following formula (1):

$$ CSS = \frac{ProductionVolume}{DomesticConsumption} \times 100\% $$  

(1)

Domestic consumption includes: production consumption, personal consumption (consumption fund), loss of production and industrial processing for non-food purposes.

The balance of commodity resources for the fishing industry, as shown above, is determined in its entirety.
Consumption Fund in 2010-2019 was determined in the amount of 22 kg / person. per year and had a threshold value of 0.8. In the new text of the Doctrine, this criterion is defined as 0.85.

When calculating the actual volumes of self-sufficiency in fish, the export of fish products was previously taken into account, which was the main reason for the decrease in the level of self-sufficiency below the threshold level (see table). In addition, a significant export of fish predetermines the need for large imports, which significantly reduces the country's foreign exchange earnings and casts doubt on the feasibility of these operations. So, for example, in 2018, with an export value of $ 5174 million, imports amounted to $ 2199 million. From this it follows that the export of fish products could be made more efficient by observing the provisions of the Doctrine. How these factors will be taken into account when implementing the new text of the Doctrine will become clear after the development of the Road Map (after 3 months) [16].

We note that the new text of the Doctrine provides for "the formation of foreign economic policy in compliance with food security criteria." This factor was previously taken into account when calculating the level of consumption using only Russian fish resources, but the text did not focus on this. It is possible that the presence of this item in the Doctrine, along with "taking measures to achieve and maintain food safety thresholds for fish products", will create conditions for its implementation.

According to Deputy Prime Minister A. Gordeev, the main innovation of the doctrine is a change in the methodology for calculating food independence indicators, to assess which instead of the indicator of the share of domestic products in the total amount of food resources consumed, an international indicator is provided - an indicator of self-sufficiency. In contrast to the previous one, this indicator, in his opinion, can be effectively used to assess both the internal state of the food market by regions of Russia and the export potential of the country as a whole.

In our opinion, this innovation is not significant. The export potential, as can be seen from the table, could be calculated before. A possible innovation may be a possible restriction of exports, which, given the existing obligations to increase the value of exports, is unlikely. There is also an increase in the dependence of Russian producers on exports due to the depreciation of the ruble, which increases the share of exports in the volume of ruble revenue, stimulates export deliveries, and discourages supplies to the domestic market. In addition, the high dependence of Russian fishing companies on exports is enhanced by lending for current needs for future catch, which is almost not practiced by Russian banks.

Increasing self-sufficiency will be facilitated by the further removal of administrative barriers to the delivery of Russian fish products to domestic ports, the introduction of differentiated import duties, the growth of incomes of Russian citizens, the reduction in the share of enterprises with foreign capital in wholesale and retail trade, which, according to the State Council Working Group, reached 2014 90%.

We do not support the opinion of liberal economists that changing the situation on the domestic market, including with prices for fish products, is possible only by economic methods. Our studies show that in fisheries there is an economic bias in favor of private business, while the interests of the state are infringed [17]. Correcting this is advisable both by economic and administrative measures. In support of the correctness of such conclusions, we refer to the article by I. Korotaev “A serious fight has begun for a tasty piece of the fishing industry”, which shows that the fishing industry lacks a reasonable balance of interests of the state and private fishing enterprises. The article also discusses the international experience in the formation of legislation that takes into account the interests of society, the state and enterprises [18].

3. Conclusion
The analysis of the theoretical content of the Doctrine of Food Security of Russia until 2020 and its practical implementation in the country's fisheries showed:

1. The main purpose of the Doctrine of 2010-2019 - ensuring the consumption of fish by the population of Russia in the amount of 17.6 kg per capita from own sources was not achieved in any of the periods. It amounted to 8.2 kg in 2013 and 9.4 kg in 2018. The highest level of 11.4 kg was achieved in 2016, i.e. after criticizing the economic policy of fisheries at a meeting of the Presidium of the State Council at the end of 2015 (see table 1).
2. Economic availability of fish products, taking into account average money income in Russia, decreased from 216 kg in 2010 to 184 kg in 2018. So, availability of fish products decreased by 14.4%. [19]. At the same time, quality of consuming fish products decreased as population started to buy mostly whole round fish in comparison with more expansive processed fish. This conclusion can be done based on the statistic of Murmansk Region. Statistic says, that purchasing capacity of average per capita income of population for whole round fish was 291,6 kg in 2010 and was 438,9 kg in 2018 (increased 1,5 times). And vice-versa for processed fish, purchasing capacity decreased by 18.7% (from 237,5 kg in 2010 to 193 kg in 2018). And much more decreasing of purchasing capacity monitored for fillet – by 27.5% (from 184,6 kg in 2010 to 133,9 kg in 2018) [20], [14].

3. There are two opposite tasks in front of fishing industry: first of all to ensure consumption of fish products on level 18,7 kg at the expenses of Russian sources and, therefore, to limit fish export. Secondly, to increase export gain by 1.5 times to 2024 year (from 5,174 billion USD to 8 billion USD) [15], [21], [22].

Fishing companies are interested in increasing of fish export and it is unlikely, that Rushing Fishery agency will limit export. At the same time there are not so much reserves to increase export costs by increasing level of fish processing. Results from this, that new Doctrine will not be fulfilled like previous.

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References
[1] Food Security Doctrine of the Russian Federation 2010 *Collection of Legislation of the RF.* 5502
[2] Jennings S *et al* 2016 Aquatic food security: insights into challenges and solutions from an analysis of interactions between fisheries, aquaculture, food safety, human health, fish and human welfare, economy and environment *Fish and Fisheries* 174 893-938
[3] 2016 Federal State Statistics Service. Russian Statistical Yearbook Available from: http://www.gks.ru/bgd/regl/b16_13/Main.htm [Accessed 18 December 2019]
[4] 2017 The results of the activities of the Federal Agency for Fisheries in 2016 and objectives for 2017 Available from: http://fish.gov.ru/files/documents/ob_agentstve/kollegiya/itogi_2016_zadachi_2017-1.pdf [Accessed 18 December 2019]
[5] Kharenko E N *et al* 2014 The definition of conversion factors for calculating the consumption of fish and fish products by the population of the Russian Federation *Statistics* 11 38-53
[6] Surinov A The most important socio-economic indicators of the Russian Federation in the mirror of statistics Available from: http://www.gks.ru/free_doc/new_site/rostopstat/smi/prez-surinov.pdf [Accessed 18 December 2019]
[7] The FAS sent a report to the President of Russia on measures aimed at limiting the rise in fish prices Available from: https://fas.gov.ru/news/2061 [Accessed 14 January 2020]
[8] Federal Law of 08.12.2003 N 164-FZ «On the Basics of State Regulation of Foreign Trade» 2003SZ RF50 4850
[9] Rosrybolovstvo counts on the assistance of the FAS in regulating fish prices Available from: http://fish.gov.ru/press-tsentr/obzor-smi/13802-rospybolovstvo-rasschityvaet-na-pomoshch-fas-v-regulirovanii-tsen-na-rybu [Accessed 14 January 2020]
[10] Vasiliev AM 2017 Fish prices have become higher than the purchasing power of the population *Fisheries* 4 3-7
[11] On the development of the fishery complex of the Russian Federation: working group of the Presidium of the State Council Available from: http://vniro.ru/files/Gossovet_doklad.pdf [Accessed 10th January 2020]
[12] Federal Agency for Fisheries: Information on the catch of fish, the extraction of other aquatic
biological resources and the seizure of commercial aquaculture facilities (commercial fish farming) for January-December 2018 (cumulative) Available from: http://fish.gov.ru/files/documents/otraslevaya_deyatelnost/ekonomika_otrasli/statistika_analitika/2019/f407-01-12_2018.pdf [Accessed 20 December 2019]

[13] A third of the expenses of Russians on food are related to the purchase of meat products Available from: https://eadaily.com/en/news/2019/08/19/tret-rashodov-rossiyan-na-edu-svyazany-s-pokupkoy-myasnyh-produktov [Accessed 15 January 2020]

[14] 2019 Fishery complex of the Murmansk region Federal State Statistics Service, Territorial body of the Federal State Statistics Service for the Murmansk region p 48

[15] Draft Decree of the President of the Russian Federation On Amendments to the Doctrine of Food Security of the Russian Federation, approved by Decree of the President of the Russian Federation dated January 30 2010 No. 120 (Doctrine approved on 27 December 2019) Available from: https://www.garant.ru/products/ipo/prime/doc/56641501/#review [Accessed 18 January 2020]

[16] Konakhina NA 2018 Evaluation of Russian Arctic Foreign Trade Activity IOP Conference Series: Earth and Environmental Science 180(1) 012018 Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85051944969&doi=10.1088%2f1755-1315%2f180%2f1%2f012018&partnerID=40&md5=c2b36d01887498db3d26e4ad4b985f0 [Accessed 18 January 2020]

[17] Vasilyev A et al 2018 Scientific and applied fundamentals of sustainable development and modernization of marine economic activities in the western part of the Arctic zone of the Russian Federation report IEP KSC RAS p 126

[18] Korotaev I A Serious struggle began for a tasty piece of the fishing industry Available from: https://konkurent.ru/article/18819 [Accessed 15 January 2020]

[19] Seaside fish is the basis of Russia’s food security Available from: https://primstat.gks.ru/folder/49006/document/57078 [Accessed 18 January 2020]

[20] 2016 Fisheries complex of the Murmansk region Federal State Statistics Service Territorial body of the Federal State Statistics Service for the Murmansk region p 43

[21] Shestakov I The development of fish processing will double the return on fish exports to $ 8 billion Available from: http://www.fish.gov.ru/press-tsentr/novosti/24748-ilya-shestakov-razvitie-rybopererabotki-pozvolit-otdachu-ot-eksporta-ryby-v-dva-raz-a-do-8-mldr-dollarov [Accessed 13 May 2019]

[22] Dyatlovskaya E The project «Export of agricultural products» will cost 406.8 billion rubles Available from: https://www.agroinvestor.ru/investments/news/31071-proekt-eksport-produktii-apk-oboydetsya-v-406-8-mlrd-rublei/full/?utm_source=telegram&utm_medium=social&utm_campaign=targetings-Agroinvestor&utm_content=rss#0_8_1245_2125_1110_199708166 [Accessed 13 May 2019]