



## RUSSIAN AGRICULTURE AND FISHERIES

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## Food Security and Countersanctions

By Stephen K. Wegren (Southern Methodist University, Dallas TX)

### Abstract

Russia's food security has roots in the international environment. Russia's food security regime grew out of the 2007–2008 spike in global food prices. Russia's food embargo came in response to Western sanctions. The protectionism offered by the food embargo and broader food security policy have beneficial impacts for the agricultural sector. Support for food security is being institutionalized in bureaucratic structures. After sanctions and countersanctions end, a quick reentry to the Russian market is unlikely.

### The Rise of Russia's Food Security Regime

The rise of Russia's food security regime is linked to the international environment. Public expressions of concern over Russia's food insecurity had appeared off and on since the mid-1990s. The spike in global food prices in 2007–2008, however, led directly to concrete action by the Russian government. During 2008 food inflation in Russia reached nearly 18 percent. In late 2008 former Minister of Agriculture Gordeev formed a committee within the ministry to draft a food security doctrine that was completed in November 2008. Subsequently, it was presented to former President Dmitry Medvedev, who signed a decree that introduced the food security doctrine at the end of January 2010. The doctrine calls for "food independence of the Russian Federation," based upon quantitative and qualitative measures. Medvedev argued that the doctrine was necessary to ensure that the Russian population has access to affordable and healthy food. Since 2010 food trade policy has been oriented toward attaining and protecting food security, which in the Russian context is defined as a reduction in reliance on food imports.<sup>1</sup> Later in 2010 when Russia experienced a disastrous harvest (61 million tons) due to extreme heat and drought that wiped out a third of the harvest, the food security doctrine appeared prescient and propelled Russia to impose a year-long export ban on grain that extended to July 2011. Following the federal lead, regional governments adopted their own programs for food security.

Russia's food embargo announced in August 2014 is an extension of its food security policy. The food embargo was originally employed against the United States, member states of the European Union, Australia, Canada, and Norway. In 2015 Albania, Iceland, Lichtenstein, and Montenegro were added. The embargo prohibits fresh and processed beef, pork, fruit and vegetables, poultry, fish, cheese, and milk and dairy products to be exported to Russia. The embargo has been

renewed twice and is in effect to the end of 2017. The embargo is a punishment against countries that participate in sanctions against Russia. Russia's countersanctions, as the food embargo is called in Russia, combined with import substitution and food self-sufficiency are designed to strengthen domestic producers.

### Agricultural Growth

The policy triad of countersanctions, food security, and food self-sufficiency has benefited the agricultural sector as reflected in two outcomes. First, the value of agricultural production continues to grow. Since the rise of Russia's food security regime in 2010, the nominal ruble value of food production rose from R2.5 trillion in 2010 to R5.6 trillion in 2016. It would be difficult to argue that Western sanctions have had a deleterious effect on Russia's agricultural sector. Despite trade barriers and other economic obstacles, the value of agricultural production in constant rubles increased 3.5 percent in 2014, 3 percent in 2015, and 4.8 percent in 2016. In contrast, the national economy either contracted or was flat during those three years. Tkachev forecast that the value of agricultural production would increase "no less" than 4 percent during 2017 in constant rubles.

The nominal ruble value of crop production almost tripled during 2010–2016, from R1.1 trillion to R3.2 trillion rubles. Each grain harvest during 2014–2016 has been over 100 million tons. The 2016 harvest, after cleaning, exceeded 120 million tons, the highest level since 1978. The wheat harvest in 2016 reached a record high of 73.3 million tons, up from 61.8 million tons in 2015. During the 2015/16 agricultural year Russia surpassed the United States as the largest wheat exporter in the world.<sup>2</sup> Russia was forecast to be the number one wheat exporter again during the 2016/17 agricultural year, but due to a late season trade dispute with Turkey over import duties Russia may fall to number two behind the U.S. In addition to wheat, in 2016 record high harvests were also tabulated for corn, sunflower, soy,

1 Stephen K. Wegren, Alexander Nikulin, and Irina Trotsuk, "The Russian Variant of Food Security," *Problems of Post-Communism* 64 (January–February 2017): 47–62.

2 An agricultural year is July 1 of one year to June 30 of the following year.

vegetables, and fruits. Good weather has obviously had a beneficial impact on crop production. Beyond weather, however, there has been an increase in the application of mineral fertilizer, an expansion in cultivated land, and growth in the state-subsidized crop insurance program that protects grain producers from catastrophic loss. In 2017, over 80 million hectares are to be cultivated, a post-Soviet high.

A second outcome is the reduction in food imports. In 2013 the value of Russia's food imports reached a high of \$43 billion and the gap between food imports and exports was nearly \$27 billion. Since then, the dollar value has declined in consecutive years and fell to less than \$25 billion in 2016, with the gap between imports and exports less than \$8 billion. The Austrian Institute for Economic Research estimates that during the first 2.5 years of the food embargo (2014 through 2016), members of the European Union lost 17.6 billion euro in trade with Russia.<sup>3</sup>

### The Belarus Problem

In December 2015, during his annual speech before Parliament, President Putin challenged the country to attain self-sufficiency for basic food commodities within five years.<sup>4</sup> Minister of Agriculture Alexander Tkachev has waffled a bit about whether Putin's 2020 target date can be achieved, but overall there is no question that food self-sufficiency is a policy priority. The biggest production deficits are in milk and dairy products. Russia experiences a 7 million ton deficit in milk production every year and does not meet the target of the food security doctrine for 90 percent self-sufficiency. Milk production remained flat in 2016 at 30.7 million tons, although there was an increase in milk output per cow, which is important because since 2006 the number of dairy cows has contracted by 1.1 million on agricultural enterprises and households, but has risen on family farms. Regional policies provide support for family dairy farms in the hope to raise output. In Moscow oblast, for example, the regional government compensates 50 percent of the cost of modernization of family dairy farms and up to 20 percent for the construction of cheese-making facilities. Minister Tkachev is optimistic that the annual deficit in milk production can be overcome and the country will attain self-sufficiency by 2022.<sup>5</sup>

3 "Antirossiiskie sanktsii stoili ES pochti 18 milliardov evro," January 9, 2017, <<http://kvedomosti.ru>>, accessed January 9, 2017.

4 Interfax, "Putin nazval RF potentsial'no krupneishim v mire postavshchkom ekologicheski chistykh produktov," December 3, 2015, <<http://www.interfax.ru/business/482981>>, accessed February 8, 2017.

5 "Tkachev: RF dolzhna polnos'iu obespechit' sebia molochnoi i ovoshchoi produktsiei cherez piat' let," February 17, 2017,

In the meantime, Belarus is a major source of transit and a key supplier of milk and dairy to Russia. There have been repeated disputes over the quality of dairy products arriving from Belarus, with the allegation of added ingredients and antibiotics making milk and cheese less than pure. Impure milk enters Russia because of false labeling and counterfeit customs documents. President Lukashenko has strongly defended the quality of his country's food exports and Belarussian officials rejected the criticisms of Russia's Rossel'khoznadzor, citing hundreds of instances in which falsified food products were seized in 2016 and continued to be seized in 2017.<sup>6</sup>

The Vice Premier of Belarus, Mikhail Rusyi, suggested that the two countries work together against falsified food products, and the two countries announced the creation of a joint working group to discuss the problem of inaccurate labeling. Subsequently, in February 2017 Russia's Ministry of Agriculture renewed its appeal for strict labeling of dairy products with a full list of contents.<sup>7</sup> The ministry also suggested that any imported food product that does not clearly indicate the country of origin should be destroyed.<sup>8</sup> In April 2017 President Putin instructed the Russian government to work with Belarus to allow Russian inspection of enterprises where doubts about quality exist.

Allegations of illegal food trade has also become a contentious issue between the two governments. Russia accuses Belarus of being a willful conduit for "contraband" food—products from embargoed countries. For example, Belarus was alleged to export five times more apples to Russia than it produces, the implication being that embargoed apples from Poland and perhaps Moldova are being transited through Belarus.<sup>9</sup> During the first week in April 2017 in Tver' and Pskov oblasts approximately 300 tons of contraband food were stopped from entering Russia via Belarus.

<<http://www.kvedomosti.ru>>, accessed February 17, 2017.

6 "Sergei Dankvert: 'Nasha sistema kontrolya rabotaet'," March 10, 2017, <<http://kvedomosti.ru/news/sergej-dankvert-nasha-sistema-kontrolya-rabotaet.html>>, accessed March 10, 2017.

7 Press-sluzhba Minsel'khoza Rossii, "Minsel'khaz Rossii vystupaet za uzhestochenie markirovki molokosoderhashchikh produktov," February 27, 2017, <<http://www.mcx.ru/news/news/show/59195.355.htm>>, accessed February 27, 2017.

8 "Minsel'khaz predlozhit' unichtozhat' vsiu produktsiiu s neisnoi stranoi proiskhozhdeniia," March 6, 2017, <<http://kvedomosti.ru/news/minselxoz-predlozhit-unichtozhat-vsyu-produktsiyu-s-neyasnoj-stranoj-proisxozhdeniya.html>>, accessed March 6, 2017.

9 Alina Evstigneeva, "Belorussii prodala Rossii v 5 raz bol'she iablok, chem proizvela," September 30, 2016, <<http://www.agroinvestor.ru/markets/news/24368-belorussiya-prodala-rossii-v-5-raz-bolshe-yablok/>>, accessed September 30, 2016.

The food came from Poland, Turkey, and Spain.<sup>10</sup> President Lukashenko rejects Russian complaints and argues that it is “Russian bandits” who are re-exporting contraband food to Russia.<sup>11</sup> Russian economists argue that the re-export of food to Russia is not state sponsored but rather benefits private entrepreneurs and firms located in Belarus.<sup>12</sup> Russia’s agency in charge of checking food transit and food safety, Rossel’khoz nadzor, has started a system of electronic certification that identifies suppliers and recipients of suspected contraband food that arrives from Belarus.

### Broad Support

Support for food security and import substitution is broad within Russia. Trade protectionism means that the largest food producers, such as agroholdings, benefit from protectionism and higher market share on the domestic food market. Russian food retailers have increased profits from selling domestic products with high profit margins. Restaurants have adjusted to using primarily domestic products and anecdotal evidence suggests chefs are showing considerable creativity in crafting attractive and tasty dishes. Consumers have adapted their diets to higher prices and the absence of Western products. Consumers exhibit what may be called food nationalism. Food nationalism means that domestic products are preferred over foreign products even when price and quality are the same. Two large surveys of consumers commissioned by the author found that in 2015, 94 percent of urban consumers preferred to buy domestic food products even when the price and quality was identical to imported food; the same was in true in 2016 when 90 percent of urban consumers expressed a similar sentiment. Surveys also show that Russian consumers support national food security policy and food trade restrictions.

Inasmuch as countersanctions represent an extension of food security policy, support for import substitution is becoming rooted in various bureaucracies, which means that protectionism will remain significant even after countersanctions end. A federal commission headed by the prime minister oversees and reports on the

national food security situation. The Federation Council has a committee that monitors food imports. Regional governments have established committees to oversee, monitor, and report on their food security. The Ministry of Agriculture benefits from being at the center of food security policy. Within the ministry, the federal agency Rossel’khoz nadzor is best known for its responsibility to inspect food at the border. In 2015, Rossel’khoz nadzor had regional offices in 58 of Russia’s regions, including Crimea. It is likely that with an expansion in responsibility the number of employees and regional offices has increased, thereby spreading support for restrictive trade policies to more regions. Rossel’khoz nadzor is empowered to seize and destroy “contraband food” from companies, stores, or individuals at any location, either at the border or within Russia. From July 2015 through February 2017 Rossel’khoz nadzor seized about 10,000 tons of contraband food, destroying about 10 percent.<sup>13</sup> The destruction of contraband food has been controversial, with critics arguing that it should be distributed to Russia’s poor. This idea has little support among legislators, however, who fear that if seized food is not destroyed it will end up being sold for profit on the black market.

At the beginning of 2017 Rossel’khoz nadzor was given expanded powers to check on agricultural land use during ownership changes; to ensure that veterinary and sanitary standards are upheld during the raising, processing, and export of animal husbandry and poultry, including the verification of standards for animal husbandry from households; quality control over the wine growing industry; and oversight over commodity intervention for agricultural products and aquaculture.<sup>14</sup>

Import substitution extends beyond food production and is gaining support among domestic seed producers. In 2015 Russia was highly dependent upon imported seed: 75 percent of sugar beet seed was imported, 44 percent for sunflower, 45 percent for corn, and 34 percent for vegetables.<sup>15</sup> The value of the Russian seed market is R50 billion, of which about one-half is comprised of imported seed.<sup>16</sup> In March 2016 Prime Minister Medvedev called for an end to imports of high-yield seed, stat-

10 RIA Novosti, “Predotvrashchen vvoz v RF iz Belorussii okolo 300 t sanktsionnoi produktsii,” April 12, 2017, <[www.agromedia.ru](http://www.agromedia.ru)>, accessed April 12, 2017.

11 “Lukashenko: Reeksportom sanktsionnykh produktov zanimaisya Rossiiskie bandity,” April 10, 2017, <<http://kvedomosti.ru/news/lukashenko-reeksportom-sanktsionnykh-produktov-zanimayutsya-rossijskie-bandity.html>>, accessed April 10, 2017.

12 “Ekonomist: postavka ‘sanktsionki’ iz Belorussii v Rossiiu stala pribyl’nym biznesom,” April 4, 2017, <<http://kvedomosti.ru/news/ekonomist-postavka-sanktsionki-iz-belorussii-v-rossiiu-stala-pribylnym-biznesom.html>>, accessed April 4, 2017.

13 Ekaterina Diatlovskaya, “V 2016 godu iz prodazhi iz’iato 450 tonn sanktsionnykh produktov pitaniia,” March 2, 2017, <<http://www.agroinvestor.ru/analytics/news/26270-v-2016-godu-iz-prodazhi-izyato-450-tonn/>>, accessed March 2, 2017.

14 “Minsel’khoz dast bol’she polnomochii Rossel’khoz nadzoru,” January 18, 2017, <<http://kvedomosti.ru/news/minselkhoz-dast-bolshe-polnomochij-rosselkhoz nadzoru.html>>, accessed January 18, 2017.

15 Irina Burda, “Kak v Rossii reshaetsia problema nekhvatki otechestvennykh semian,” *Agroinvestor* 9 (2016), September 2016, <<http://www.agroinvestor.ru/markets/article/24138-kak-v-rossii-reshaetsia-problema-nekhvatki-semyan/>>.

16 Ibid.

ing that, “we absolutely are able to do this. It is not complicated, it just requires energy and money.”<sup>17</sup>

To improve seed independence the government plans to build 148 specialized seed selection centers throughout the country by 2020. In January 2017, a draft government resolution began to circulate that provides for the creation of a scientific-technical program within the agricultural sector that would run to 2025. This program would be geared toward research and experiments for the development of pedigree livestock and high-yield seed, high quality feed, food additives and medicines for livestock, among other things. The program plans annual focus on branch activity within agriculture. For example, during 2017 the research focus will be on the development of high-yield potato seed and hybrid breeds of poultry. In 2018, research will focus on high-yield seed for sugar beet, vegetables, sunflower, and corn. Financing will be established once the program is adopted but estimates are that it could run to R180 billion.<sup>18</sup>

### When Countersanctions End

Russian officials have maintained that after the West removes its sanctions, Russia will end its countersanctions. Once Donald Trump took office, optimism that U.S. sanctions might end early were reciprocated on the Russian side by suggestions that countersanctions could also be ended early or not renewed.<sup>19</sup> That prospect concerned Minister of Agriculture Tkachev, who repeatedly argued that the agricultural sector has benefited from

the protectionism offered by the food embargo. In fact, Tkachev is on record as favoring an extension of countersanctions for another five years. Early optimism quickly faded, however, and by the end of January 2017 Prime Minister Medvedev began to downplay an early end to sanctions. In early March 2017 Medvedev assured Tkachev and producers in the agricultural sector that “no one is repealing sanctions,” emphasizing that sanctions appear to have a permanence that “create good conditions for the development of agriculture.”<sup>20</sup>

Although it is difficult to say when Western sanctions will be repealed, it is reasonable to expect that at some point sanctions and countersanctions will end. The interesting question is how quickly Russia’s borders will open to Western food imports. The signals from the Russian side have been clear and unequivocal: sanctioning countries should not expect a rapid reentry to the Russian food market. There are three obstacles that will slow reentry to the Russian market: (1) since countersanctions were introduced in 2014 domestic food commodities have been substituted for imports; (2) Rossel'khoz nadzor would need to send its specialists to foreign food plants to inspect and certify that those enterprises meet Russian sanitary standards, a process that is long and complicated; and (3) budgetary lines for the inspection of foreign enterprises have been reduced, thereby making the process even longer. For these reasons, the effects of the food embargo are likely to be felt long after it has ended.

### About the Author

Stephen Wegren is professor of political science at Southern Methodist University, Dallas, TX, USA.

17 “Izbavit'sia ot zavisimosti,” *Sel'skaia zhizn'*, March 17–23, 2016, 2.

18 “Importozameshchenie dobralos' do iaits i semian,” January 26, 2017, <<http://kvedomosti.ru/news/importozameshchenie-dobralos-do-yaici-semyan.html>>, accessed January 26, 2017.

19 “Russian Food Sanctions May Not be Extended—Deputy Prime Minister,” *The Moscow Times*, January 13, 2017, <[www.themoscowtimes.com](http://www.themoscowtimes.com)>, accessed January 13, 2017; and Maria Zheleznova, “Russia Hopes to End Agricultural Counter Sanctions by 2017,” *The Moscow Times*, January 16, 2017, <[www.themoscowtimes.com](http://www.themoscowtimes.com)>, accessed January 16, 2017.

20 “Medvedev: ‘Ne boites’, nikto sanktsii ne otmennit,’” March 3, 2017, <<http://kvedomosti.ru/news/medvedev-ne-bojtes-nikto-sankcii-ne-otmenit.html>>, accessed March 3, 2017.

## Sustainability in Russian Fisheries?

By Frode Nilssen (Nord University, Bodø, Norway)

### Abstract

Russia does by and large conform with biological international sustainability measures. The main challenge for Russia is to achieve its own goals related to economic and social sustainability in the seafood sector. The challenges that Russia is facing are discussed based on a historical review of the sector and the Post-Soviet institutional setup in Russia.

### Defining Sustainability

Sustainability has increasingly been stressed as an important consideration in the debate on food production. The World Commission on Environment and Development (1987) widely introduced the concept of “sustainable development” with the publication of “Our common future.” According to Helms, sustainability as an important dimension of food production has been interpreted in many ways.<sup>1</sup> There are two dominant approaches to the concept: the wealth approach and the mosaic approach. The “mosaic” approach, which seems to have become the more predominant over time, breaks sustainable development into three components: economy, society and ecology. In this article, we discuss how Russia relates to the sustainability issue in the fishing industry with emphasis on the economy and society. This discussion fits into the current debate around the nature and development of contemporary food systems, reflecting in part increasing societal concerns and the food safety/health dimensions of industrialized food production practices, as well as food security concerns.<sup>2</sup>

### The Seafood Industry in Russia

Fish from both wild and aquaculture production contributed about 16 percent of global animal-based protein in 2009. Fish are the primary source of animal-based protein for 1.3 billion people. Yet 57 percent of wild marine fish stocks are exploited to their full potential, and another 30 percent are overexploited and are likely to decline in the future. For these overexploited fish stocks to recover to a more productive and balanced level, it is necessary to see improvements in fisheries management in the areas concerned, in order to reach a sustainable level.<sup>3</sup>

The Soviet-Russian seafood industry has always represented an important dimension of the Russian food system. During the first half of the Soviet period the total catch was relatively modest with a total output of 1.05 million tons in 1913. There was, however, a steady growth in the fish catch over the years which reached 6.73 million tons in 1968—an increase of more than 600%. The big increase came with the industrialization of the fishing industry which provided the grounds for a significant continuation of the fish catches. The development was, among others, characterized by the massive building and use of large factory trawlers (BMRT, RTM, and RKTZ trawlers),<sup>4</sup> with extensive extractive and storage capacity. Another important factor that enabled the huge growth in fishing was extensive fisheries in distant waters. As a result, the Soviet Union experienced an increase of the fishing catch that brought the total to more than 11 million metric tons of seafood in the 1980s. The entire system was designed to support the Soviet home market, divided into five huge seafood general directorates which served under its ministry and complied with Gosplan’s requirements for output. This involved basically all activities related to fishing, processing and distribution in the Soviet Union. Thus, almost the entire catch was directed to the domestic Soviet market to meet the ambition of a per capita consumption of 25 kilograms of seafood and to support the needs of the Soviet army. Interestingly, the extraction of bio-resources was based on sound biological measures—in a way biological sustainable fisheries. The economic and social significance of the seafood industry was also important. In 1968, the fishing industry employed around 321,500 persons which was 13.6% of the total employed in the Soviet food industry. As an example, the seafood complex in North West Russia (mainly in the Murmansk area) employed around 75,000 people. In addition to direct employment comes other effects on society and the economy—which is an indication

1 M. Helms, “Food sustainability, food security and the environment,” *British Food Journal*, vol. 106, no. 5 (2004): 380–387.

2 B. Ilbery and D. Maye, “Food Supply chains and sustainability: evidence from specialist food producers in the Scottish/English borders,” *Land and Use Policy*, vol. 22 (2005): 331–344.

3 T. Searchinger, et al. *Creating a Sustainable Food Future: Interim findings* (World Resources Institute, 2013), <<http://www.wri.org/publication/creating-sustainable-food-future-interim-findings>>.

and FAO, *The State of World Fisheries and Aquaculture 2016. Contributing to food security and nutrition* (Rome: FAO, 2016).

4 N. P. Sysoev, *Ekonomika rybnoi promyshlennosti SSSR* (Moscow: Izdatelstvo Pishchevaya promyshlennost, 1970).

of the economic and social sustainability of the industry at that period.

The status of the fishing industry today in post-Soviet Russia has changed substantially, with a total seafood catch of around 4.4 million tons—or approximately 40% of the former total. Russia's population, with around 143 million people, is approximately half of what it was in the Soviet Union. In that respect, one could assume that the seafood supplies in principle would meet the domestic needs at the same level as before, during the peak years with extensive fish landings during the Soviet period. The total output from the fishing industry at that time (1970s and 1980s) corresponded to around 35kg round weight annually, while the comparable figure for 2016 was around 31kg round weight. (Round weight is defined as the weight of the whole fish before processing or removal of any part.) See Figure 1 on p. 9 for an illustration of the development of the fish catch.

When discussing the fisheries sector and its productivity and contribution to the domestic Russian food system, it is important to bear in mind one large difference now in the post-Soviet Russian economy from the Soviet period. The difference represents a significant game changer due to the alteration of the economic system and working conditions in Russia. As opposed to the Soviet period, the current industrial actors are independent, privately held companies, which behave mainly as rational economic actors in a kind of market-based economy. There are of course many nuances that could be made here. Notwithstanding, one major effect of this new industrial organization is that many of the actors in the fishing industry primarily sell their fish to buyers who offer the highest price, whether they are located in foreign countries or in Russia. The result is that the Russian fishermen currently export a large amount of their annual catch.<sup>5</sup> So, what is left for the domestic market is basically fish products that are not in strong demand in foreign markets. In 2015, the total exports from the Russian fishermen were approximately 1.8 million tons, or around 40% of the total Russian catch.<sup>6</sup> In 2016, the total exports were 1.9 million tons. Most of the seafood exports consist of frozen fish (88% of the total exports). This large export of fish leaves the Russian authorities with two strongly related strains: The Russian market is “under-supplied” with seafood mainly due to the export orientation of the Russian fish-

ing industry. And unlike the situation during the Soviet period, there are no legal instruments that the authorities can make use of to direct a larger part of the landings to the Russian domestic market. The quota rights are allocated to individual legal actors owning the fishing vessels/companies, and there are no conditions attached between quota rights and delivery requirements. The second issue is that extensive exports of seafood from Russian fishing companies lead to a need for importation of seafood to meet domestic demand. This has increasingly been regarded as an unwanted situation by the higher political/administrative federal levels in Russia who are interested in food security and self-sufficiency.

Seen from the perspective of the Russian Federal government, the overarching goal is to secure stable and sufficient supplies of seafood to the domestic market—without becoming too dependent on any foreign supplier country or organization. Another political goal is to restore the industrial capacity to harvest, produce and deliver seafood to the domestic market. Along with the Russian agroindustrial complex, the Russian seafood industry represents the basis of the Russian food security strategy. This is clearly expressed in the Russian food security doctrine of 30 January 2010.<sup>7</sup> The Doctrine calls for food independence and food security for Russia. In the doctrine, food independence means sustainable domestic production, while food security refers to the physical and economic availability of safe foodstuffs for every citizen. Both factors are important dimensions for Russian food policy and as a basis for the development of plans for the fisheries and agricultural complexes.

### The Seafood Industry and Social and Economic Sustainability

Russia's current fishing industry is torn between two aspects of sustainability. One is responsibility for social sustainability—that is to secure Russian self-sufficiency of seafood to the domestic market. The other is the struggle for the economic sustainability of the Russian fishing industry. The struggle to reach an acceptable level for these two dimensions has been ongoing ever since the dissolution of the Soviet Union.

The core of the struggle is rooted in the market-economic adaptation of the fishing industry and the institutional framework, or working conditions for the industry in Russia. At the very beginning of the post-Soviet era, it was virtually a matter of “sink or swim” for the fishing companies.<sup>8</sup> The industry became extremely frag-

5 For a discussion of this phenomenon in the early post-Soviet period, see F. Nilssen and G. Hønneland, Institutional Change and the Problems of Restructuring the Russian Fishing Industry, *Post-communist Economies*, vol. 13 (2001): 313–330.

6 *Kollegiya. Itogi dejatel'nosti Federal'nogo Agenstva po Rybolovstvu v 2016 godu i zadachi na 2017 god* (Moscow: Rosrybolovstvo, 2017).

7 Decree of the President of the Russian Federation. 30.01.2010 no. 120. “On Approval of the Food Security Doctrine of the Russian Federation.”

8 For a discussion, see Nilssen and Hønneland, *Op. Cit.*

mented, and only a small number of companies had experience with market-based transactions in general and in trade with foreign companies in particular. The general picture was that this new situation separated the land-based industry from the fishing companies, resulting in an industry with a set of winners and losers. The destiny of the land-based companies was that they were stuck in the middle between access to the raw material source on the one hand, and the down-stream wholesaler/retailing industry on the other hand. A typical example of this adaptation was that many of the land-based processors and support-structures suffered a relatively immediate economic drain. Basically, the lack of business was related to problems with access to raw material as many of the former important species were now exported. This situation was explained by two partly interlinked phenomena. Some suffered from a lack of raw material simply because they had cash flow problems at a time when the fishing companies demanded up-front payment. Few of the land-based processors had the financial resources to do that. Consequently, many of the land-based former Soviet fish processors were excluded from the market for raw material—the basis for economic sustainability. The other problem was linked to the sheer fact that many of the processors on shore relied on white-fish resources—which were now less available due to the export orientation of the fishing companies. All in all, this situation led to an almost total regeneration of the land-based seafood processing sector in Russia where many of the new actors based their business on imported fish.

Fishing companies were differentiated by managerial skills on one side and experience on the other. Historically, most of the fishing companies (organisational units) from the Soviet Union were specialised and designed to work with specific fisheries in designated areas. The winners in this group were mainly the fishing companies that were set up to exploit the white fish resources and had medium-sized fishing vessels rigged for fresh fish or round freezing of the catch. These were the ones that had the opportunity to seek western markets—which were more than willing to purchase their catch. The ones who struggled more were the ones with very large vessels designed for distant fleet fisheries mainly for pelagic species. As the national 200 mile zones were introduced, the former resources that large vessel fleets relied on became much less accessible. Combined with a high increase in fuel costs, the economy for this part of the fishing fleet quickly became economically unsustainable. This was the same problem for the fishing companies that were equipped with smaller fishing vessels designed for fisheries in more sheltered waters. They had to place their faith in the

relatively unreliable payments from the on-shore processors, and faced an uncertain destiny. The common problem for all the fishing companies was the old age of the fleet. The last round of fleet renewal took place during the mid-1980s. At that time, the fuel cost was not an issue. A result of this was that the typical fishing vessel had a fuel consumption rate that exceeded a comparable western vessel by approximately three times—which generated substantial costs in the new economic regime. This issue alone made the operation far from economically sustainable.

Immediately after the fall of the Soviet Union, many of the Russian captains and company leaders with prior international trade experience tried to generate and secure stable income in hard currency. The strategy involved exporting white fish that was in high demand in Western markets through direct deliveries from the fishing vessel to the foreign market ports (Norway in the North-West Russia, and to Japan and China in the Far East). The obvious advantage of delivering the fish abroad was up-front payment at delivery, paid with hard currency. Further deliveries to foreign ports also involved other important advantages, such as very short time ashore, low costs and little time spent on control issues related to fish quality, customs and the like. Over the years, the renewal of the Russian fishing fleet was contingent on agreements with Western economic actors which basically were binding the fish landings to foreign ports. This effect resulted from a combination of the Russian institutional system and taxation rules on one hand and the cash flow and payment structure to the western trading partners and suppliers of capital equipment (new or second hand fishing vessels), on the other. The strategy was sustainable in terms of economic survival for many of the companies, albeit seen as highly undesirable from the perspective of Russian federal authorities. Since then we have seen a strong move toward consolidation, where a few large conglomerates or holding companies have taken control over a large share of the total fishing quotas of the most attractive species, mainly Alaska Pollack in the Russian far East and Atlantic Cod in North West Russia. Much of these volumes of white fish are exported.

### **Food Security, Sustainability and Political Intentions**

The struggle at the federal administrative/political level to cope with the development of fishing companies' economic behaviour has so far not been much of a success in terms of increased social and economic contribution to Russia. The latest initiative from the Russian federal Fisheries Agency "Rosrybolovstvo" has been to designate 20% of total fish quotas of the most attractive species to investment purposes. Further, there shall be restrictions



on the number of leased vessels that may take part in the fisheries. The main purpose of the investment quotas is to encourage fishing companies to spend their money in Russia—sending orders to Russian firms for the construction of new fishing vessels. This is considered an important dimension of the social and economic contribution to Russia from the fisheries sector. A large part of Russia's fishing fleet is old and obsolete and a renewal is necessary. According to Ilya Shestakov, the head of Rosrybolovstvo, more than 80% of the fishing fleet is older than 20 years. It is desirable that the fishing companies invest in Russia, and also that they deliver their catch to Russian processing companies. This is regarded as an impor-

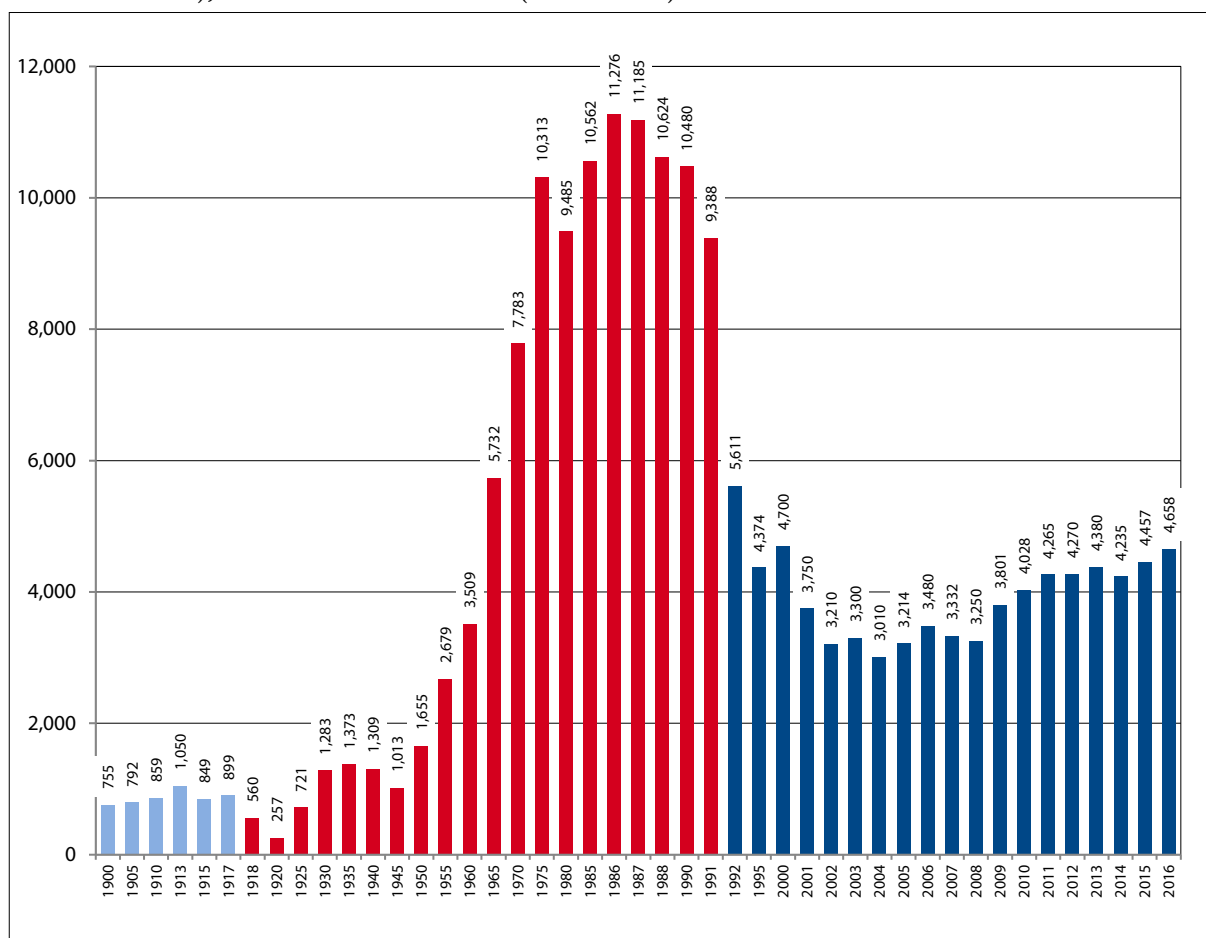
tant measure to encourage economic actors to enhance their economic and social sustainability contribution to Russia. Thus, the investment quotas are designed to be used for 15% fleet renewal (primarily in Russian wharfs) and 5% in onshore processing plants.<sup>9</sup>

The policy is in line with a series of federal plans and instructive documents: the concepts for the development of the fishing industry in Russia from 2003, 2008 and 2013, as well as the food security doctrine from 2010. It will, however, remain to be seen to what extent this effort will prove to have a significant effect on the contribution of the fishing industry to economic and social sustainability to Russia.

#### About the Author

Frode Nilssen is professor in Marketing at Nord University Business school, Norway.

**Figure 1: Russian Catches of Marine Bioresources: Russian Empire (1900–1917), USSR (1918–1991), and Post-Soviet Russia (1992–2016). 1000 metric tons**



Source: Own compilation based on amongst others V.K. Zilanov, *Rosrybolovstvo*, Rosstat

9 "Gosudarstvo podderzhit obnolenie flota i razvitie proizvodstva rybnoi produktsii," *Rybnoe khoziaistvo*, no. 6 (2015): 15–21.

## Sustainable Agriculture in Russia

By Stephen K. Wegren (Southern Methodist University, Dallas TX)

### Abstract:

Russia has different forms of sustainable agriculture, encompassing small-scale production by households and by farm enterprises. Small-scale sustainable agriculture has little ecological impact compared to large-scale industrial farming. Greenhouse production of vegetables has increased significantly in recent years and helps the country substitute vegetable imports. The organic food sector is a small niche market. The primary obstacle to growth of the organic food market is high retail price. Russia in 2016 adopted a law that forbids the production of genetically-modified food.

### The Importance of Sustainable Agriculture

Climate change and accompanying environmental degradation—falling water tables, frequency of extreme heat, drought, and flooding, soil erosion, and soil bleached of nutrients—affect global food supplies and threaten food security for millions of people.<sup>1</sup> Russia has not escaped the effects of climate change, experiencing heat and regional drought in grain growing regions (2009, 2010, 2012), and extensive flooding in the Far East (2013). In recent years, when weather conditions cooperated, grain harvests have exceeded 100 million tons (2014, 2015, 2016). In 2015 and 2016 Russia led the world in wheat exports.

Russia is a major contributor to climate change through the emission of carbon dioxide and greenhouse gases.<sup>2</sup> Russia was a signatory to the December 2015 Paris agreement in which more than 185 nations pledged to try to hold global warming to below 2° C, but to date Russia has not ratified this agreement. Russia's industrial agricultural system adds to global warming through the emission of greenhouse gases. It is estimated that greenhouse gas emissions from livestock account for one-third of total emissions in Russia. As livestock waste decomposes it releases methane. Methane absorbs heat from the sun and therefore heats the atmosphere. For this reason, it is considered a greenhouse gas. It has a shorter life span than carbon dioxide but is more potent. Carbon dioxide remains in the atmosphere for centuries whereas methane lasts a couple of decades before decaying to carbon dioxide. During those two decades, methane warms the planet an estimated 86 times as much as carbon dioxide.

Manure that enters reservoirs, streams, and lakes cause the spread of blue-green algae that emit carbon dioxide during their life and methane gas when they die. Large farming enterprises, which raise more live-

stock than private farms and households, account for more than one-half of greenhouse gas emissions. Russian experts have forecast that a 1° C rise in air temperature will increase winter wheat yields in Russia's southern European section. An increase of 2° C, however, will lead to a decrease in winter grain yield by 25–35% in the north and west of the country. An increase of 3–4° C will lead to a decrease in grain yields in virtually the entire European part of Russia.<sup>3</sup>

Further, industrial agriculture destroys micro-nutrients in soil through the application of large quantities of pesticides, herbicides, and mineral fertilizer. It is possible that Putin's instruction to bring tens of millions of hectares of unused and abandoned agricultural land into production is intended to compensate for land that is becoming nutritionally depleted even though recent trends show higher yields per hectare. Paradoxically, the recent increase in Russia's grain harvests is in part due to the application of more mineral fertilizers.<sup>4</sup>

### Household Sustainable Agriculture

Russia possesses one of two soil belts in the world known as Chernozem belts. The Russian belt runs from Southern Russia into Siberia across Kursk, Lipetsk, Tambov and Voronezh oblasts. Chernozem is black-colored soil with a high percentage of humus, phosphoric acids, phosphorus and ammonia. Chernozem is very fertile soil that produces high agricultural yield. Black earth soil presents an opportunity to produce high-quality non-GMO food with the “made in Russia” brand. The effort toward food self-sufficiency and import substitution that arose after Western sanctions in 2014 provide further impetus to sustainable agriculture that will make Russian agriculture greener going forward.

1 See Lester R. Brown, *Full Planet, Empty Plates: The New Geopolitics of Food Scarcity* (New York: W. W. Norton and Co., 2012).

2 See Oleg Anisimov, “Challenges of the Changing Climate: A Case Study of Russia,” *Russian Analytical Digest*, no. 185 (June 2016): 2–5.

3 A. G. Paptsov, et al., *Adaptatsiia sel'skogo khoziaistva Rossii k global'nym izmeneniiam klimata* (Moscow: All Russian Scientific Institute on Agricultural Economy, 2015), 5.

4 Ministry of Agriculture, “Minsel'khoz Rossii: sel'khozproizvoditeli priobrel'i na 40% bol'she mineral'nykh udobrenii, chem v proshlom godu,” February 7, 2017, <<http://www.mcx.ru/news/news/show/58687.355.htm>>, accessed February 7, 2017.

Sustainable agriculture does minimal damage to the ecosystem and avoids the use of harmful pesticides and chemical fertilizers. There are different forms of sustainable agriculture in Russia today. One form of sustainable agriculture spans the Soviet and post-Soviet period and consists of household or individual farming. The most common type of small-scale sustainable agriculture is *lichnoe podsobnoe khoziaistvo*, or subsidiary farming on small plots of land. In 2016 these small plots of land surrounding rural housing averaged .8 hectares; and in urban locations they averaged .3 hectares.<sup>5</sup> Subsidiary farming may be said to represent “accidental” sustainable agriculture. Labor is manual by necessity; because land plots are small, it is difficult to find machinery that is suitable for tilling. Even today, it is common to see villagers tilling their plot with a hoe. Fertilizer is organic animal manure because mineral fertilizer is expensive.

Food production from *lichnoe podsobnoe khoziaistvo* is in long-term decline for a variety of reasons. Some regional governments have enacted rules that limit the number of animals households may raise due to the outbreak of African swine fever and Asian bird flu. Ministry of Agriculture officials have expressed concern over veterinary and sanitary conditions in household operations. The consequence is that household meat production has decreased and the decline is expected to continue. In March 2017, the chair of the Duma committee on agrarian policy introduced a bill that would limit the number of household animals throughout the country, citing unsanitary conditions that threaten the health of household operators and risk spreading infections from animal to animal.<sup>6</sup> Other reasons why *lichnoe podsobnoe khoziaistvo* is in decline include competition for market share from agrohholdings and large farm enterprises; an economic environment in which household production is less necessary than in the past because of increases in monetary income and a proliferation of other ways to earn supplementary income; and the conversion of *lichnoe podsobnoe khoziaistvo* to a private farm enterprise.

Other forms of small-scale individual sustainable agriculture exist as well.

(1) *Sadovodstvo*, where the main activity is the growing of fruit—apples, pears, plums, cherries—although some vegetables may be grown; the land plot may be owned. (2) *Ogorodnichestvo*, where vegetable growing is the only activity, most commonly cucumber, tomatoes,

carrots, green onion, garlic, and squash. The land cannot be privately owned. (3) *Dacha* plots, used by urban residents for weekend relaxation during warm months. Because *dacha* plots are used mainly for recreation they have no significant impact on the household economy. Each of these forms of individualized sustainable agriculture has a land plot that is smaller than *lichnoe podsobnoe khoziaistvo* and share similar characteristics: manual labor, organic fertilizer, and food is consumed by the household. The environmental footprint is small for these forms of sustainable agriculture.

### Greenhouses

A second category of sustainable agriculture is a *teplitsa*, or greenhouse. *Teplitsi* take two forms. The first form consists of primitive, temporary structures made from plastic and wood and are used by individuals on their *dacha* plots, *ogorodnichestvo*, or *lichnoe podsobnoe khoziaistvo* to protect vegetables from frost. A second form is operated by farm enterprises and cover a significant area of land, although smaller than traditional farms. For example, the author visited the largest *teplista* complex in Moscow oblast, covering 129 hectares. This second type of greenhouse is a permanent structure made of metal and glass. Greenhouses operated by farm enterprises are mechanized, automated and produce for commercial markets. Large farm commercialized production is sustainable, but not necessarily organic farming, because mineral fertilizer may be used, although pest control methods are natural.

At the beginning of 2017, commercial greenhouses occupied 2,300 hectares throughout Russia. During 2014–2016, 504 hectares of greenhouse production were started, with 350 hectares planned for 2017, so *teplisti* represent a growth sector. In 2016, more than R33.5 billion were invested in new greenhouses.<sup>7</sup> Vegetables are most commonly grown—in 2016 greenhouse production on farm enterprises totaled more than 800,000 tons, up from 639,000 tons in 2015. During the first three months of 2017 more than 100,000 tons of vegetables were harvested from greenhouses.<sup>8</sup> Greenhouse production is regionally concentrated, with the top five regions accounting for one-third of total greenhouse production. In 2016, the leading regional greenhouse producer was Krasnodarskii krai with 88,000 tons, followed by the Republic of Bashkiria (66,500 tons), Karachaevo-Cherkessia (45,800 tons), Stavropol'skii krai (42,400 tons), and the Republic of Tatarstan (37,700

5 Rosstat, *Vserossiiskaia sel'skokhoziaistvennaia perepis' 2016 goda: predvaritel'nye itogi* (Moscow: Rosstat, 2016), 7.

6 Ekaterina Diatlovskaia, “Gosduma mozhet ogranichit' pogolov'e skota v lichnykh khoziaistvakh,” March 6, 2017, <<http://www.agroinvestor.ru/technologies/news/26354-gosduma-mozhet-ogranichit-pogolove-skota/>>, accessed March 6, 2017.

7 Anton Kakushin, “Milliardy v zakrytom grunte,” *Agroinvestor* 1 (January 2017): 25.

8 Press-sluzhba Minsel'khoza Rossii, “V Rossii sobrano uzhe bol'she 100 tys. tonn teplichnykh ovoshchei,” March 30, 2017, <[www.mcx.ru](http://www.mcx.ru)>, accessed March 30, 2017.

tons).<sup>9</sup> Regional initiatives to expand greenhouse production have been undertaken by private companies in Krasnodar, Stavropol', Lipetsk, and Belgorod.<sup>10</sup> Commercial greenhouses are looked upon with favor by federal policymakers, who see them as valuable producers that help the country substitute for vegetable imports and attain self-sufficiency by 2020, a goal posited by Putin in his December 2015 speech to Parliament. Flowers may be grown during winter months.

### Organic Farming

Another type of sustainable agriculture is organic farming. During his speech to Parliament in December 2015 President Vladimir Putin stated that, "Russia has the resources to become the world's largest producer of healthy, ecologically clean, high-quality food that has already been sold for several years by western producers."<sup>11</sup> During the past seven years the value of organic food production in Russia has grown from \$120 million to \$200 million. Minister of Agriculture Alexander Tkachev predicted that Russia may capture 15% of the world's organic market during the next 20 years. Tkachev observes that throughout the world 45 million hectares of land are under organic cultivation. Russia, he notes, has 10 million hectares of unused agricultural land that has not been fertilized in 20 years and "may be converted to organic farming at any moment."<sup>12</sup>

In 2016 Russia was one of 82 countries in the world without federal legislation on organic food.<sup>13</sup> National standards regulating the production of organic food came into effect in January 2017. At present, organic foods sold in Russia are certified by international agencies, but that certification is expensive, as much as 600–800 euro per day.<sup>14</sup> A bill on organic food production is expected to be introduced in autumn 2017. Until a federal law is adopted, organic food is regulated by regional laws, but not all regions have adopted

laws on organic food so procedures for certification and quality vary.

Information about organic farming is limited because no systematic attempt is made by Rosstat or other government bodies to collect data on it. In 2012, there were an estimated 260 organic farms in Russia located in 46 regions, a number that certainly is higher by 2017.<sup>15</sup> Available evidence suggests that Russia's organic food market remains small. Based on survey results, in early 2017 the Institute of Agricultural Economy estimates that only 2% of arable agricultural land is certified as organic, and organic food products account for just 4% of the Russian food market.<sup>16</sup> That said, the organic movement is growing as Russian companies market "ecologically pure" food products. Organic food stores now exist in most large cities. In 2014 there were more than 50 Internet stores that sold organic food, with delivery to residents in large cities. Private farmers have embraced this market, offering a variety of options for the delivery of organic produce on a weekly or monthly basis to subscribers.

The first retail store to sell organic food opened in Moscow in 2004 and was in business for 18 months. Initial investment exceeded R2 million and the store grossed R8 million during its existence. In the end, however, the store failed to capture much market share. Its produce targeted an upper income consumer, but the benefits of organic food had not yet been widely publicized so consumers "did not understand the philosophy of consuming organic products."<sup>17</sup> Although consumer demand is growing, the primary obstacle to growth in this sector remains the retail price of organic food. It is estimated that organic vegetables cost up to four times more than non-organic. Retail prices for organic pork range from 250%–600% higher than pork raised with antibiotics and growth hormones. Organic milk costs twice as much as non-organic, organic tvorog and butter as much as four times more, and organic sour cream can cost about eight times more. For these reasons the average value of consumption of organic food annually in Russia is about 7% that of the United States.<sup>18</sup>

9 Tatiana Klustikova, "Piat' regionov sobrali tret' urozhaiya teplykh ovoshchei," March 12, 2017, <<http://www.agroinvestor.ru/analytics/news/26411-pyat-regionov-sobrali-tret-urozhaya/>>, accessed March 12, 2017.

10 Kakushin, "Milliard v zakrytom grunte. Za piat' let postroeno 600 ga novykh teplits," 26–27.

11 Interfax, "Putin nazval RF potentsial'no krupneishim v mire postavshchkom ekologicheski chistykh produktov," December 3, 2015, <<http://www.interfax.ru/business/482981>>, accessed February 8, 2017.

12 Tat'iana Kulistokova, "Rossiia mozhet zaniat' 15% mirovogo rynka organicheskoi produktsii," April 29, 2017, <<http://www.agroinvestor.ru/analytics/news/27233-rossiya-mozhet-zanyat-15-mirovogo-rynka/>>, accessed April 29, 2017.

13 "V liderakh—ATP," *Sel'skaia zhizn'*, February 18–24, 2016, 11.

14 S. Kharitonov, "Organicheskoe sel'skoe khoziaistvo: puti razvitiia v regionakh Rossii," *APK: ekonomika, upravlenie*, 9 (2014): 51.

15 Ibid., 55.

16 Ekaterina Diatlovskaia, "Lish' 0,2% sel'khozogodnii v Rossii sertifitsirovany kak organicheskie," March 14, 2017, <<http://www.agroinvestor.ru/technologies/news/26445-lish-0-2-selkhozogodiy-v-rossii-sertifitsirovany/>>, accessed March 14, 2017.

17 Ibid., 52.

18 Ibid.

## State Policy Toward Genetically Modified Food

For several years Russian policymakers expressed concern over genetically modified food and opposed its production in Russia. From fall 2015 the federal government adopted a moratorium on the importation of genetically modified crops and livestock, but at the time no penalties were specified for violations. In July 2016 President Putin signed a federal law that prohibits the cultivation of genetically modified crops or the raising of genetically modified livestock.<sup>19</sup> The July 2016 law prohibits the importation into Russia of any genetically modified plant, animal, or food product. Commercial enterprises face fines from R100,000–R500,000 per violation. Non-commercial entities may be fined from R10,000–R50,000. The prohibition affects whatever negligible Western food is still found on shelves in Russian food stores. The only exception to the ban is genetically modified organisms used in scientific research.

## Federal and Regional Initiatives

Because sustainable agriculture facilitates food self-sufficiency and helps Russian companies compete on the global organic food market, federal policymakers have expressed support for sustainable agriculture. In April 2012, federal policy for ecological development of Russia to 2030 was confirmed by Prime Minister Dmitry Medvedev.<sup>20</sup> The policy aims to balance economic growth with protection of the environment. The policy document was long on tasks and goals—18 pages—but did not attach specific sources or amounts of funding so one wonders about its real efficacy. In November 2016, the State Duma began discussion of a bill that defines differences between *sadovodstvo* and *ogorodnichestvo* and also regulates economic relations within gardening communities. The previous law on *sadovodstvo* was adopted in the mid-1990s, so updating is necessary and Prime Minister Medvedev supports the bill, but it has yet to be adopted.

Green initiatives and reform of agricultural practices to make production sustainable are occurring at

the regional level. For example, Belgorod oblast catapulted into the top five agricultural producers based on the ruble value of production on the back of production from large agroholding companies, which represent the apex of industrial agricultural development with advanced mechanization and innovation. Belgorod is also adopting green policies. One such policy is to encourage agroholdings to convert from agro-chemical use of land to agro-biological use through the application of organic fertilizer and reduction in chemical fertilizers. A second policy aims to increase the production of organic fertilizers. On December 23, 2016, it was announced that a new federal Center for Organic Agriculture would become operational in 2017. By the end of December 2016, Belgorod's department of agriculture was already in contact with the new center. Belgorod's Governor Yevgeny Savchenko convened a meeting to approve a project on production of organic fertilizer in Belgorod. Approval was given for the construction of a plant that will turn 150,000 tons of animal waste into 70,000 tons of organic fertilizer a year, enough to provide fertilizer for 365,000 hectares. The plant is expected to cost R275 million and generate R17 million in tax revenue annually. It is due to be completed by September 2017 and will be built in Shebekinskii raion.<sup>21</sup>

## Conclusion

Russia remains wedded to its industrial agricultural system and this orientation is unlikely to change because recovery in the agricultural sector is due to improved production in that system. That said, an understanding that sustainable practices are good for agriculture and consumers is shared by regional governments and the federal center. Sustainable agriculture, especially organic production, is a growth sector. There is money to be made both in domestic and international markets. Sustainable agricultural practices support import substitution and food self-sufficiency, and for that reason will continue to receive support from federal and regional policymakers.

### About the Author

Stephen Wegren is professor of political science at Southern Methodist University, Dallas, TX, USA.

19 Agrofakt, "V. Putin podpisal zakon o zaprete na vyrashchivanie i vvoz GMO," July 7, 2016, <[www.agronews.ru](http://www.agronews.ru)>, accessed July 7, 2016.

20 "Utverzhdeny osnovy gosudarstvennoi politiki v oblasti ekologicheskogo razvitiia Rossii na period do 2030 goda," April 30, 2012, <<http://kremlin.ru/events/president/news/15177>>, accessed February 11, 2017.

21 Anna Lyubovedskaya, "Kommentariy. V Belgorodskoy oblasti budut proizvodit' bioorgano-mineral'nyye udobreniya novogo pokoleniya," January 13, 2017, <<http://kvedomosti.ru/news/kommentarij-v-belgorodskoj-oblasti-budut-proizvodit-bioorgano-mineralnye-udobreniya-novogo-pokoleniya.html>>, accessed January 13, 2017.

## A Sustainable Russian Fishing Industry: Feeding Russia with (Russian) Seafood?

By Christel Elvestad (Nord University, Bodø, Norway)

### Abstract

The Russian government has high ambitions and several measures have been adopted to develop the seafood industry. The overall self-sufficiency ratio for seafood has nevertheless decreased since 2010. The self-sufficiency ratio has improved for some fish species. However, with one exception, this is not a result of increased supply of domestic seafood, but a consequence of the counter-sanctions introduced in 2014. The market situation and several forms of structural constraints have led to a considerable increase in export volumes of Russian fish from 2010 to 2016. Russia has therefore not succeeded in substituting imported products with domestically produced seafood so far.

### (Sea)Food Security and Import Substitution

Is the Russian fishing industry sustainable in the sense that it is capable of feeding the Russian population with domestically produced seafood? The Russian food security doctrine, adopted in 2010, pays special attention to the food sector as a strategically important part of the Russian economy. The main aim of the doctrine is to ensure national food independence and stability of supply, guaranteeing access to food for all citizens as well as the quality and safety of food products.<sup>1</sup> One important element of the doctrine is the ambitions of further developing the fisheries and aquaculture sectors. The goal is to achieve 80 per cent self-sufficiency of seafood by 2020<sup>2</sup> and the Russian government plans to allocate 92.5 billion rubles for investment.

To be able to increase the supply of Russian seafood to the home market, it is necessary to ensure both higher levels of wild caught fish and increased production of farmed fish. However, domestic supply is also influenced by changes in international trade patterns. An important part of the food security doctrine is the principle of import substitution, which means to replace imported products with domestically produced goods. The emphasis on import substitution has especially been seen as a response to the US and EU sanctions, but it has a broader strategic significance in terms of rebuilding the Russian economy and ensuring national security.

So, to what extent has the production of seafood increased after the introduction of the food security doctrine? What reductions can be seen in the volumes of imported seafood after the food bans, excluding important suppliers of seafood like Norway and EU-member states from the Russian market? Has the government managed to shift the Russian fishing industry away from export and towards supplying the domestic market?

### Status of Domestic Production

Total domestic production of seafood has increased by 16 percent from 4,028 million tons in 2010 to 4,657 million tons in 2016.<sup>3</sup>

The situation for the most important fish species is that catches of herring have increased by 5 percent from 2010–2016, catches of mackerel have doubled, while the status for whitefish (pollock, cod and haddock) shows a 9 percent increase.<sup>4</sup> For salmon species (salmonids), there has been a 13 percent increase.<sup>5</sup>

The production of seafood from the aquaculture sector is only 4 percent of the total domestic production (172,100 tons). Russia nevertheless has a strong potential in aquaculture and the government has taken several initiatives to stimulate the industry. Freshwater aquaculture (carp, sturgeon) accounts for almost 85 per cent of the industry and marine aquaculture (salmonids, molluscs, aquatic plants) accounts for 15 percent. The targets set by the food security doctrine is 4.5 million tons for wild caught fish and 315 thousand tons of farmed fish production by 2020. In terms of wild catch, the goal has already been reached. However, the catch increase is a function of natural fluctuations of the fish stock which is reflected in the quota situation. Domestic production of farmed fish is more directly connected to governmental policies fostering industry development. The status for aquaculture is that production levels are just about half way to target.

### Import Substitution?

Looking at the overall picture, wild catch of fish has grown by 16 percent, while import of seafood is reduced by 48 percent as a result of the counter-sanctions in the period from 2010 to 2016. At the same time, the total level of export has grown by 16 percent. The result is that volumes of supply

1 Approved by Decree #120, signed by the President of Russia on January 30, 2010.

2 Resolution number 1416, amendments to “the State Program on the Development of the Russian Fishery Industrial Sector from 2013–2020,” December 2014.

3 Total catch, import and export data; source ROSSTAT.

4 For the specific fish species; author’s own calculations based on data from FAO, ROSSTAT and the Norwegian Seafood Council.

5 Catch data from 2015.

to the Russian market has been reduced and the self-sufficiency ratio has come down from 84 to 70 in this period.<sup>6</sup>

Looking into the most important categories of fish, we nevertheless see a more varied picture.<sup>7</sup> The supply to the domestic market has grown by 34 per cent and the self-sufficiency ratio has improved especially for mackerel (43–97) mainly due to increased catches. For herring, the situation is that the total supply to the Russian market is reduced by 20 percent. The self-sufficiency ratio has nevertheless improved (85–113), but this is due to the reduced volumes of import. For whitefish, the total supply to the Russian market has increased by almost 20 percent due to increasing catches and import. However, the self-sufficiency ratio has gone down, because of a considerable increase in the volumes whitefish exported from 2010 to 2016.

After the counter-sanctions were implemented there has been a radical change in the top 10 list of foreign suppliers to the Russian seafood market. Norway, Iceland, U.K., Estonia, Latvia, Ukraine and Canada are out of the market, while the Faroe Islands is number one followed by Chile, Greenland, India, Thailand, Morocco and Peru as newcomers on the 2016 ranking list. China holds its position as the second largest foreign supplier of seafood to Russia, and volumes have increased by 23 percent. If one includes the increased volumes of Russian seafood in transit through China, the increase is 33 percent from 2010 to 2016.

Using import of salmon as an illustration, Norway was the dominant supplier (88 percent) before the food ban was introduced in 2014. In 2016, Chile and the Faroe Islands were the main foreign suppliers. In addition, some volumes of Atlantic salmon from Europe reach Russia through Belarus explaining the change from number 10 on the list in 2010 to number 4 in the 2016 ranking. As expected, import volumes of salmon are significantly reduced. Import volumes have been reduced by 23 percent from 2010 to 2016, but almost 60 percent from the peak year 2012. The self-sufficiency ratio has been reduced (99–95),<sup>8</sup> as exports are up more than 60 percent from 2010 to 2016.

### Market Constraints

After 2014, there has been a dramatic decline in per capita consumption of seafood in Russia from a rather stable level of 22–23 kg to about 15 kg in 2016. The shrinking market is a result of the fall of the ruble, rising prices and declining household income. As prices have risen by more

than 30 percent for many types of fish and far more for high value products, consumers are switching to cheaper sources of protein. The Minister of Agriculture, Alexander Tkachov, had to answer to criticism as a Duma representative claimed that ordinary Russians could soon not even afford to buy herring.<sup>9</sup> This is a symbolic claim as herring is often referred to as the fish “of the people,” because of its characteristics as a healthy and inexpensive food. In fact, Russian consumers are switching to Pacific herring because there has been a shortage of imported Atlantic herring and Pacific herring is more affordable. As Robert W. Orttung writes, the “masses are tightening their belt.”<sup>10</sup>

The other important dimension is the fact that the Russian seafood industry is highly export oriented and the economic situation is creating even stronger incentives for export. The 16 percent increase of the total export volumes from 2010 to 2016 illustrates that the downward spiral of the home market triggers Russian companies to sell even more of their products abroad. Alaska pollock, which makes up the bulk of the Russian total catch, is not in great demand in Russia. Hence, fishermen in the Far East sell their catch to Asian countries like South Korea and China at competitive prices and to meet a large and steady customer demand. The Russian government has not been able to shift the Russian fishing industry away from export to supplying the domestic market. Even though the issue of introducing export restraints have been discussed, the Russian government has followed up on its WTO commitments, reducing export duties on fish and fish products to zero over a four-year period from accession.<sup>11</sup>

### Structural Constraints

One of the main structural constraints of domestic supply is related to the high costs of transport from the Far East to European Russia. Head of the Federal Russian Agency for Fisheries, Ilya Shestakov, has recognized the severe problem of transporting fish from the fishing grounds to Russian ports and further on to Russian consumers. Despite the decision to subsidize railroad transport, there has been no follow-up on the promised grant of 500 million rubles.<sup>12</sup> The Deputy Prime Minister of Russia and Presidential Envoy to the Far Eastern Federal District, Yury Trutnev, has openly criticized the Ministry of Transport and Russian Railways for doing nothing to implement the requests of the president to facilitate deliveries of seafood to European Russia. In addition, fish caught in the Far East is resold several

6 The formula for calculating the self-sufficiency ratio is (domestic production + import – export = domestic supply): domestic production/domestic supply\*100. This is in line with the formulas used by FAO, except for “changes in stock” which is normally included in calculations of the self-sufficiency ratio (for agri-food).

7 Author’s own calculations based on data from FAO, ROSSTAT and the Norwegian Seafood Council.

8 Based on catch figures from 2015.

9 <<http://fishnews.ru/news/30189>>

10 “Feeding Russia” by Robert W. Orttung. *Russian Analytical Digest* No. 184, 24 May 2016.

11 WTO Trade Policy Review, The Russian Federation (WT/TPR/S/345).

times. So, when it finally arrives in the European part of Russia, prices have increased so much that it makes the products too expensive.

Another structural constraint, is that most of the infrastructure, such as fishing harbors, cold storage and freezing facilities, is from the Soviet period and thus in desperate need of modernization. Processing plants are also in need of upgrading. Furthermore, there are few incentives for private companies to deliver to home-ports, inter alia because of bureaucratic fees and time-consuming control procedures and paperwork. Russian fishermen often prefer to deliver in foreign harbors as bunkering and other services are better and economic transactions and administrative procedures are more swift and reliable. In North West Russia, the situation is that Murmansk harbor, which used to be the most important fishing harbor in the region, was recently sold to private actors. The new owners prefer to deal with bulk cargo of crushed stone and coal instead of serving the fishing fleet who go elsewhere to deliver. There are nevertheless new attempts to strengthen the infrastructure. For instance, in the Far East there are plans for a new seafood cluster with a number of fish processing plants and cold store facilities with a total capacity of 700,000 metric tons, as well as new transport and port infrastructure and a trade and logistical center.<sup>13</sup>

Another structural challenge is the obsolete fishing fleet as Russian fishing vessels are on average more than 25 years old. At the moment, the hottest topic is the government's plans to renew the fishing fleet through so called investment quotas.<sup>14</sup> Sixteen types of fish are approved under the investment quota regime, among others cod and haddock in the Northern Fishery Basin and pollack and Pacific herring in the Far Eastern Fishery Basin.<sup>15</sup> Most fishing vessels have been built in the West, but the government has linked the renewal of the fishing fleet to import substitution goals and so called localization requirements. This means that the new fish-

ing vessels should be built in Russia and if Russian companies want to import parts, at least 40 percent must be assembled locally.

This decision by the Ministry of Industry and Trade has met a lot of opposition from the fishing industry, since the localization requirements seem difficult to achieve in practice. The reason for this is that the Russian maritime industry has limited experience with producing fishing vessels. Another issue is the fact that Russian shipyards are mostly fully booked with assignments to build new military vessels. Thus, foreign suppliers will probably get a good share of the lucrative contracts. For instance, Norwegian companies have already signed agreements to design and equip new fishing vessels. Russian pragmatism has already become visible in terms of developing the aquaculture industry. Norwegian companies are also providing the Russian market with brood stock, in addition to feed and equipment to produce Atlantic salmon, as these are vital input factors that domestic business actors are unable to supply.<sup>16</sup>

## Conclusions

The total domestic production of seafood has increased due to positive natural fluctuations of fish stocks in the period after the introduction of the food security doctrine. The counter-sanctions have led to dramatically reduced volumes of imported seafood. However, the large and growing levels of seafood export result in a downward trend and a lower self-sufficiency ratio for seafood. The sanctions have given some room for maneuver to protect and rebuild the seafood sector, but more time is needed to put reforms into action to see significant results of the various measures introduced by the Russian government. However, foreign exporters of seafood are already queuing up to be inspected and re-approved to sell seafood to Russia as soon as the market opens. The question is how long they will have to wait.

### *About the Author*

Christel Elvestad is an Associate Professor II at Nord University Business School ([christel.elvestad@nord.no](mailto:christel.elvestad@nord.no))

12 <<http://www.kompravda.eu/daily/26395.4/3271946/>>

13 <<http://www.fish.gov.ru/press-tsentr/obzor-smi/8388-proekt-sozdaniya-rybnogo-klastera-v-primore-v2016-godu-budet-vklyuchen-vgosprogrammy>>

14 Investment quotas may be allocated to those who own or have a lease contract for vessels built at Russian shipyards or operate fish processing facilities located on the territory of the Russian Resolution #764 dated April 20, 2017, implementing the Federal Law #349 of July 3, 2016, which amends the Federal Law "On Fisheries and Preservation of Fish and Seafood. Federation.

15 Resolution #764 dated April 20, 2017, implementing the Federal Law #349 of July 3, 2016, which amends the Federal Law "On Fisheries and Preservation of Fish and Seafood.

16 See exemptions from the food ban in; "Russia's Food Embargo," by Stephen K. Wegren, *Russian Analytical Digest* No. 157, 17 December 2014.



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Research Centre for East European Studies at the University of Bremen • Country Analytical Digests • Klagenfurter Str. 8 • 28359 Bremen • Germany

Phone: +49 421-218-69600 • Telefax: +49 421-218-69607 • e-mail: [laender-analysen@uni-bremen.de](mailto:laender-analysen@uni-bremen.de) • Internet: <[www.css.ethz.ch/en/publications/rad.html](http://www.css.ethz.ch/en/publications/rad.html)>