

# Rental Payments for Aqua Bioresources

## An evaluation of Russia's state quota management system Part 1

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MORE THAN 70% of the world's fisheries are now fully-fished or over-fished, according to the Washington-based International Food Policy Research Institute. Coastal fisheries are under threat from pollution, development and the degradation of coral reef and mangrove habitats.

Some of the root causes of this crisis are dramatised in Russia, where the rapacious misuse of valuable bioresources, which includes a growing level of poaching, has left the fishing industry in a critical condition.

To a significant extent the problems originate with tax policies that do not correspond to the special features of fisheries.

In Part 1 of her analysis, Dr. Titova describes the way in which the "shock therapy" of the 1990s contributed to the transformation of one of nature's bountiful "commons", set the scene for free-for-all corruption, and undermined a sector of the economy that had been No.1 in the world fishing industry.

In Part 2, which will be published in the Spring 2002 edition of *Geophilos*, the author will provide an algorithm of a tax shift onto rental payments, and she proposes the principles for corresponding amendments to legislation.

**I**N THE BEGINNING of the 19th century David Ricardo wrote that the inelastic supply of land and natural resources would become an obstacle to economic development. In his opinion the "stinginess of nature" was the main reason for the emergence and growth of rent. He emphasised that the same principles applied to natural factors such as air, water, steam or atmospheric pressure which could vary in quality. If they could be privatised, and if a quantity of each class of quality was finite in supply, then they should generate rent as soon as the resources of poorer quality were brought into use. This was a similar process to the case with agricultural land.<sup>1</sup>

Life has confirmed the correctness of Ricardo's forecasts: the fixed supply of natural resources is not only a constraint on economic growth, but as mankind began to use an increasing number of resources of limited supply, those resources started to acquire rental values.

Dr. Mason Gaffney, arguing from the point of view of economic efficiency, concludes that it is time for society to collect rental payments for the use of rent creating factors such as accessibility to transportation centres, time slots in airports, underground water, geothermal energy, consumption of water in arid areas, the genofund (both plants and animals), protected sea routes, wind for producing energy, radio spectrum frequencies, etc.<sup>2</sup>

James Robertson, taking as his starting point the conditions of progressive ecological crises, stresses the importance of implementing taxes, duties and charges for the use of resources that ought to belong to mankind (oceanic fishery zones, sea and air routes, space), as well as to deal with economic activities that cause global ecological problems (pollution of the sea and air, oil spills, buried wastes, etc.).<sup>3</sup>

Today many socially concerned economists acknowledge the natural environment as our "common resource" which should regain its analytical independence and be retrieved from the zone of so called "externalities" and feature in public finance at its full value.<sup>4</sup> In Russia it is also recognised that the carrying capacity of ecosystems could and should be assessed on the basis of complex rental approaches.<sup>5</sup> A shift towards rental assessments makes it possible to evaluate the natural wealth of each country and the whole planet, and to determine the regulations for the use of nature from principally new positions.

Given these needs and opportunities, we are concerned about the neglect of the theory of rent, and its exclusion from the mainstream of modern economics.

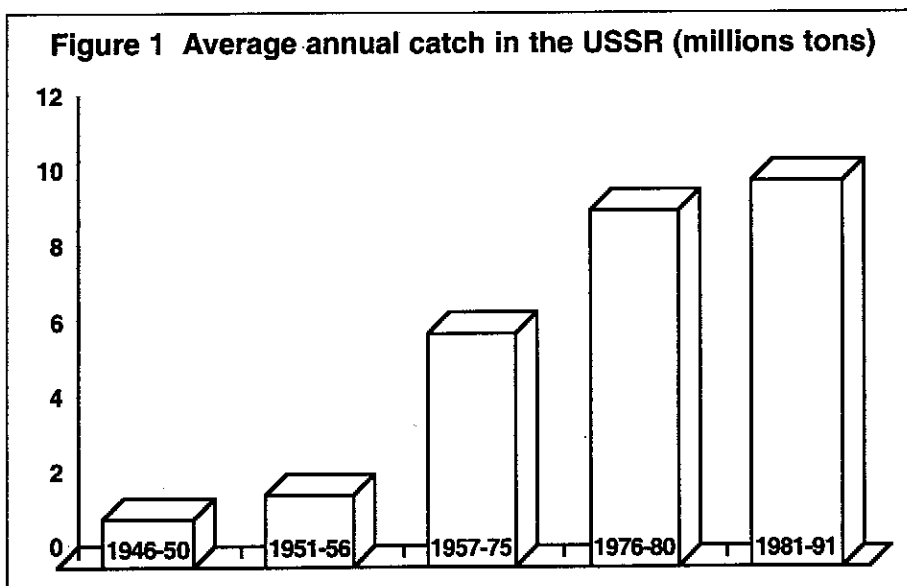
PUBLIC REVENUE from natural resources such as land, forests and mineral resources is much lower than the taxable potential. I will address two questions.

**Rent is  
ignored by  
politicians**

- 1) Why are fisheries not connected with the rent orientated tax system in the minds of both politicians and academicians, when for at least two centuries they have been known as a rent creating type of activity (see works by Adam Smith, David Ricardo, Karl Marx and Alfred Marshall and other thinkers of the past)?<sup>6</sup>
- 2) How may we introduce rent-based taxes into Russia's management of water bioresources?

In economic theory rent is regarded as a payment to the owner for permission to use resources related to land such as forest timber, grass of the meadows and the natural fruits of the earth.<sup>7</sup> In the seas, which were regarded as common property, a catch was free of charge. Fishermen did not pay rent. That is why the price for sea fish was perceived to include wages of fishermen and profits for capital. History, however, provides examples of exceptions. Adam Smith noted that land owners on the Shetland islands collected rent – partly in the form of sea-fish – for the right to tap the waters that were “abundant in fish”.<sup>8</sup> As for river fisheries, historically in most of Europe land owners charged rent, which was perceived as “a part of price of salmon as well as wages and profit”.<sup>9</sup>

But the question of paying rent for the right to catch fish in seas was never raised, for seas were not objects of private property. In addition, there was the widespread opinion that fish resources in the oceans are unlimited. Supplying the market with fish was considered to be an exclusively technological challenge. That is why Ricardian warnings about the “scarcity” of nature were ignored where fish was concerned. The



idea was supported by well known natural scientists. For example, in 1883 biologist Thomas Huxley (1825-1895) declared: "Anything we do could not seriously affect the quantity of objects in the seas and any attempt to regulate fishery is useless".<sup>10</sup>

Alfred Marshall questioned claims that we are able to catch an unlimited quantity of fish without undermining the resources of the seas. He noted that "Experience shows a falling-off in the productiveness of those fisheries that have been vigorously worked. The question is important, for there is no doubt that the future population of the world will be appreciably affected as regards both the quantity and quality, by the available supply of fish".<sup>11</sup> At the beginning of the 20th century he warned that man is able not only to deplete fish stocks but "alter the climate a little by extensive drainage works or by planting forests or cutting them down".<sup>12</sup> He was correct. There are now few doubts that humans can affect the climate. As for the resources of the oceans – they were undermined during 30 years of their active exploitation after World War II.

AN INCREASING number of works are being published, devoted to the economics of overfishing.<sup>13</sup> Unfortunately the authors do not raise the problem of rent in fisheries, or they present the issue superficially.

### **Fish rents as public revenue**

By the end of 1970s, ocean bioresources were considerably undermined. People now understand that those resources are not unlimited. An opportunity to deal with this problem was offered in 1982, when the Third UN Convention on Maritime Law introduced a new fishing regime. Exclusive national jurisdiction over coastal seas and continental shelves were extended from 12 to 200 miles, which encompassed almost 95% of the world fishing industry's total catch.

These 200-miles zones fostered new forms of economic relations, including the sharing of catches by vessels of different countries, sharing of profits and legal protection against risks. These were accompanied by the emergence of payments for the right to catch bioresources in national waters. So far, however, *few economic theorists propose fish rent as a source of public revenue*. That revenue could be used for investment in fisheries as well as for the protection and reproduction of fish resources.

One advantage of water bioresources as a source of rental revenue stems from the fact that those resources are the property of the states. Fish rent could be raised as public revenue without challenging the interests of private land owners. Prices for fish in the world markets are rising (as a result of the deficit of fish), which means that rental revenues from the use of the more productive fishing grounds are on a rising trend. The Food and Agricultural Organisation forecasts that demand for fish products in the 21st century will continue to grow and at present the gap between demand

and supply is estimated to be 10 million tons, e.g. 1/10 of the total world catch.<sup>14</sup>

Assessment of the taxable potential of fishing grounds is a solvable problem and estimates can be corrected by auctions. The most difficult assessments are of the rental potential of resources with multifunctional use, such as urban land, but methods to deal with these have been developed. Water bioresources differ in the sense that they are resources with no alternative use. In fisheries (especially in seas) we are dealing with the rent of an unimproved resource. Here we have a case of pure resources of nature, which generate pure Ricardian rent.

The shift towards a single tax for fisheries would facilitate the extraction of rent for the use of a scarce global resource. But politicians have not only ignored the unique chance to reform taxation that was provided by the global reallocation of fishery grounds in the oceans. In addition, their policies encourage poaching and illegal transactions. The miserable condition of Russia's fishing industry confirms the negative impact of taxation that fails to take into account the specific features of fisheries.

**Tax policy is the main culprit** ADAM SMITH wrote that human society would collapse if the tax system lacked a fair foundation. The consequences of the 1992 tax reform in Russia confirm that prognosis.

The Soviet Union's fishing sector after World War II was dynamic, achieving pre-eminence in the world – the No. 1 position with China and Japan. The average annual catch was 1.9 million tons in the beginning of the '50s and 10.4 million tons in the beginning of the 1990s. In 1999 the catch was 4.1 million tons and Russia was back in 7th or 8th place in the world. Russia practically stopped catching fish in the open zones of the world oceans, and is now catching fish mainly in her own economic zone. Other countries have either increased or preserved their catch of sea fish<sup>14</sup> (see Figures 1-2).

The collapse of the industry is reflected in the deterioration of living standards as measured by the reduction of per head consumption of animal proteins. After ten years of reforms consumption of dairy products is at the level of 1970, of fish – 1960, and of meat – at the level of 1980.<sup>16</sup>

Consumption of fish per head of population is 9 kg, while the medically recommended norm is 23 kg. (see Figure 3).<sup>17</sup> Everyone from Norway, Denmark, France, Italy and Canada on average consumes about 25 kg of fish a year and 2.5 times more meat than Russians. In Japan and Iceland, the average citizen consumes 65-70 kg of fish a year. In the USA, which traditionally prefers the products from stock-breeding and poultry, consumption of sea products has reached 23 kg.<sup>18</sup>

Russia, despite the shortage of products for her population, has

increased the export of fish.<sup>19</sup> Taking into account the very high medical and edible characteristics of fish products, the present situation should be regarded as a very serious disadvantage of social policy. The former Soviet Union treated the increase of per head fish consumption as a national objective. Fish used to be the most reasonable product of animal origin, for the state maintained low prices and protected its fisheries. According to the State Committee for Fisheries, the profitability of the industry in 1990-91 was 19-37%, but in 1996 the industry became unprofitable and the level of losses related to costs was 2.2% in 1996 and 7.1% in 1998.

IN ADDITION to an imperfect tax system, the shock therapy of the 1990s inflicted other problems. The fishing industry belonged to the group of capital and power-consuming industries that were deemed to be unprofitable after being exposed to the world market. Prices of essential inputs, such as energy resources, were suddenly increased. The ultimate effect was to deprive industries of the opportunity to modernise. The Soviet fisheries fleet consisted of large capacity vessels suitable for the open oceans. That fleet was depreciated both morally and physically.

Many other countries (Japan, Norway, Canada, USA, some countries of the EU) provide state support for their fishing industries. The Russian authorities, following the extreme doctrines of liberalism, did not take care of its industry during the transitional period. No incentives for investment and modernisation of the fleet were provided to meet the new market conditions.

Vessels were privatised for prices much below their real market value. Other mistakes of the privatisation policy included the severance of the technological relationship between the catching, processing and transporting functions. A considerable part of the support services (floating docks, cranes, tug boats) were privatised and sold to owners abroad.<sup>20</sup>

The outcome is the irrational use of raw materials and an increase in the costs of extraction. Ironically, however, the new owners of vessels quickly became rent orientated. They wanted immediate benefits. Nobody intended to restore the fleet. The main motivation became to catch as much fish as possible and to conceal the proceeds from taxation.

Fishermen unleashed a war on the most valuable types of bioresources which are in great demand in the world markets (salmon, sturgeon, crab, etc.). They catch not only adult crabs but the young and female of that species.<sup>21</sup> The

### **Effects of the 'shock therapy'**

**'An injudicious tax offers a great temptation to smuggling. But the penalties of smuggling must rise in proportion to the temptation. The law, contrary to all the ordinary principles of justice, first creates the temptation, and then punishes those who yield to it ...'**

— Adam Smith,  
*The Wealth of Nations*,  
Bk.V, Ch.II, Pt.II

situation is especially serious in the seas of the Far East, which contributes almost two-thirds to the total fish catch in Russia. If this approach continues, the Far East – which belongs to the most productive sectors of the world ocean – could lose its importance as a fish food area.

Poachers are selling crab in the ports of Japan or they trans-ship it to foreign vessels in neutral waters and return home with cheap hauls and concealed currency. Taxes are collected from the cheapest fish, but included in the cost of that catch are the costs of catching the valuable fish that was off-loaded in Japan.

**Criminals take a share of rent** IN ADDITION to all taxes, fishermen pay “black taxes” to criminal structures and to many state agencies that control their activities. They all want to preserve a complicated and knotty tax system. That is why, just to survive, many fish enterprises have to conceal their returns.

Academician Alexej Yablokov, a former member of the Security Council of the Russian Federation, puts fisheries in the fifth place among the sectors of the black economy. He notes that the Japanese market receives more crabs than the allocated quotas.<sup>22</sup> Japan benefits greatly from the illicit trade, for Russian fishermen sell crab at least 4-5 times cheaper than it is sold to consumers in Japan.

People with contacts in the bureaucracy acquire quotas for the most valuable biological resources and their profits are measured in hundreds percent. The State Committee of Fishing (Goskomrybolovstvo), for example, has allocated quotas to some dependent agencies that do not even have ships, and granted them exemption from taxes for all their profits.<sup>23</sup>

A big danger lies in the fact that quotas for fishing are assessed by scientific organisations that forecast catches and are responsible for the protection of reserves. There have been cases where quotas for sturgeon catches significantly exceeded amounts needed for scientific and control purposes.<sup>24</sup> This was done under the pretence of additional financing for public organisations because government could not and cannot fund them. Under the guise of scientific research, private ship owners take research officers on board, fish out all the quotas for science and sell the catch. Thus scientific institutions and fish-protection agencies become semi-commercial organisations which are more interested in increasing the fish turnover than in fish protection.

These cases worry even fishing industry big wheels. S. Soroka, the general director of the fish-catching company “FPG OAO Interbarens” (Murmansk), believes that scientists who work under such conditions cannot provide unbiased data on quotas and forecasts for permissible catches.<sup>25</sup>

According to the Accounting Chamber of the Council of Federation, the state budget is losing about US\$2 billion in taxes. Anxious leaders of the fishing industry have challenged President Putin's estimate of US\$ 2.5 billion. Speaking in Kamtchatka, he compared that figure with the US\$400 million of revenue raised for the Federal Budget from the fishing industry.

LEADERS of the fish industry recognise that the tax system is burdensome. They agree that the high level of illegal export of fish and the growth of poaching are "the fruit of a quasi-market economy", which provokes "social tension among fishermen". But they don't want the state to regulate their industry. They justify illegal exports by noting the "lack of legislative norms about the compulsory customs declaration of export of fish and other sea products from the Russian economic zone". The conclusion is logically correct: "We cannot break laws which do not exist."<sup>26</sup>

### **Inaction of leaders of the fish sector**

But Roscomrybolovstvo has no right to remain a detached observer. This State Department is responsible for initiating improvements to the fiscal and financial policies in the fishing industry. Long ago it became obvious that it was vital to simplify the tax system and get rid of anomalies in the allocation of quotas. The leadership failed to take the opportunity to shift from destructive taxes to rental taxation when it drafted the law "About fisheries and preservation of water bio resources".<sup>27</sup>

During the process of passing that law through the Parliament, vital clauses were deleted that would have enabled the government to impartially perform control and accounting functions. This was the result of a fierce fight between federal departments and regional governments for the right to control biological resources and extract fishing rent. It seems as if parliamentarians tried to legalise the faulty practices. For example, the law lacks norms about the state fishery cadastre, about fishery reservoirs, about the registration and social-economic evaluation of fishery grounds and about rental payments for water bioresources.<sup>28</sup>

The clause dedicated to monitoring water resources cannot compensate for the absence of cadastral information, which is required to establish rental rates and to control the use of resources. Such information is vital to create the analytical framework which is necessary for the

- comparative valuation of fishing areas and aquatic resources;
- starting levels of payments for the use of biological resources as the first step towards shifting the tax burden onto rental charges;
- evaluation of damage to water ecosystems;
- construction of a fair fiscal relationship between federal and regional levels of government, and
- other accounting and distribution functions related to the equalisation



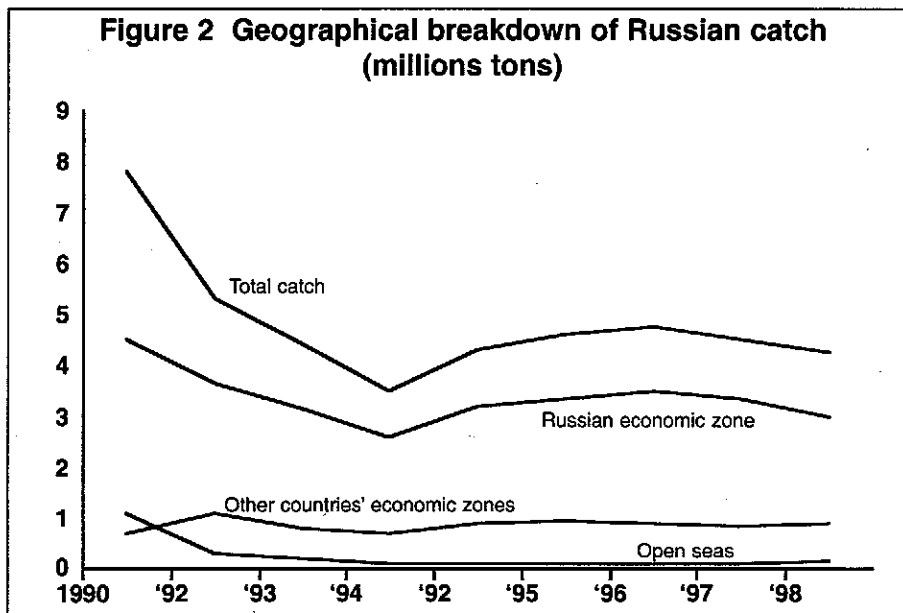
of economic conditions in fishing areas that are differentiated by their location and catching quality.

In the process of bringing relations between the Federation and its subordinate parts into good order, accounting units such as the "fund of fishing reservoir objects" which unites habitats (water reservoirs) with ichthyo fauna can be of great importance. This becomes even more important when we talk about the administration of inner reservoirs. Such a fund connects the biosphere (water reservoirs) with fish fauna. Until recently the fishing fund of inner reservoirs had been the main accounting unit for the forecast of fish reserves. It provided classification of reservoirs by types and productivity; contained information on the squares of fishing areas, length of rivers etc; and reflected the dynamics of national and territorial catches.

The draft law also failed to deal with amateur fishing. Disorder in this sphere threatens fish reserves in freshwater reservoirs. Amateur and sporting fishing can yield additional income to the budget. Foreign experience (Finland, for example) proves that services such as for fishing for sport and related tourism can be a highly profitable business that creates jobs.

In Russia amateur fishing increases the number of poachers and shapes the psychology that favours complete license over nature. Amateur fishermen exist not only within the industry, but are present at every level of power and within the new financial and other elites. These elites think

**Figure 2 Geographical breakdown of Russian catch (millions tons)**



that they have exclusive and free rights to use the best things that in fact belong to everyone by birthright. This force opposes charges for the use of resources that would restore order to fishing. Without governmental and public support, Goskomrybolovstvo will hardly be able to lower the criminal spirit of the industry through tax reform even if it decides that it ought to do so.

Thus, we see that Goskomrybolovstvo did not attempt to enable the law to address the following questions:

- What kind of fishing taxes should be adopted to avoid the disappearance of fish stocks and the industry's infrastructure, and to yield enough finance to pay for the recovery of water ecosystems?
- How do we balance the interests of private enterprise (which wants to maximise incomes), with the interests of the public (which is interested in cheap fish)?
- How do we convert amateur fishing in the vast freshwater reservoirs into a commercial activity, and encourage fishermen to protect water ecosystems?

THE DISREGARD of rent-oriented taxation is strange because the Government has on more than one occasion declared its intention to increase the role of natural rental payments in Russia's tax system.

**A strange  
silence from  
government**

The new act legalised the existing management of water bioresources. Quotas are largely allocated on a free basis, with only a part of quotas auctioned for money. The revenue is to be collected in the Fund of Management, Preservation and Reproduction of Water Bioresources, which is introduced by the Act of Government No. 1490 from 14.12.98. In 1999 one-fourth of quotas was allocated on a "paid base", while total revenue to the budget from payments was 2794 million roubles (about US\$100 million). Table 1 lists the marginal rates of payments for the use of some fish in 1999. They did not exceed 1% of market value of fish and in several cases were as low as 0.25%.

**Table 1**

Type of resource	Marginal payment	
	Roubles/ton	\$/ton
Far-East Cod	50	1.78
Arctic cod	200	7.14
Far-East Halibut	100	3.57
Far-East herring	20	0.71
Sturgeons	2000	71.40
Far-East salmon (except the most valuable)	20	0.71
Crabs	5000-10000	178-357
Shrimp	500	17.86

In 2001, following the resolution of the Government (No. 1010 of 27.12.2000), quotas for the most valuable water bioresources were to be allocated by auction. The resolution is a reaction of the government to the declaration by President Putin in Kamchatka about the urgent need to make the allocation of quotas a transparent process. Unfortunately, payments for quotas are to remain unchanged. They have nothing to do with rental payments and could be considered as one more tax taken from the pockets of consumers. They are nothing but compensation paid by the users of nature for technologically justified costs of protecting nature and they are included in the costs of extraction.

So it is easy to understand why scientists who are paid for their work by the state fisheries department (Roskomrybolovstvo) oppose rental payments.

But those who determine the fate of rent taxation fail to understand the economic essence of rental payments and their incentive importance for both conserving resources and for investment. This is characteristic not only of Roskomrybolovstvo but for all economic departments that are subject to the dogmas of neoclassical theory.

Russian officials claim that there are no legal grounds for collecting payments for fish in the national 200-mile zone, or for holding tenders and auctions. Such payments are absent from the legislation of foreign countries with developed market economies. That is the main argument used against implementation of a fiscal system adequate to the taxable potential of Russia. They don't want to confront the obvious:

- 1) in the course of the 1990s reforms, Russia became heavily dependant on raw materials extraction;
- 2) three-quarters of budget revenue stems from the taxation of industries that extract oil, gas and other natural resources, which means that Russia's potential for revenue from processing industries and services is very low compared to the developed countries of the West;
- 3) the main foundation of corruption is the private appropriation of resource rents; and
- 4) economic theory does not propose a better source of public revenue than resource rents.

**The New Zealand model** THE NEW ZEALAND Quota Management System (NZ QMS), which does propose the collection of payments for fishery resources, has attracted attention.<sup>29</sup> Jeanette Fitzsimons, a deputy of the New Zealand Parliament (1997),<sup>30</sup> says that the NZ QMS (1986) suffered from a serious flaw: the quotes were granted free, which made it difficult to introduce payments. Priority in the allocation of quotas were granted to Maoris and professional fishermen.

Fitzsimons censures as unreasonable the right to sell or rent those

quotas, which create black economic operations and speculation. There is an added complication. According to the law, leasehold relations are to be implemented only for New Zealand fishermen. But joint ventures look for ways to overcome existing bans on foreign fishermen, causing considerable loss of revenue for New Zealand.

Fitzsimons thinks that the rental approach ought to become the foundation for payments.

Reselling of quotas occurs in the US. Gaffney criticises the depravity of such practices.<sup>31</sup> He writes that granting professional fishermen the right to lease or sell quotas results not only in speculation with quotas and private appropriation of rent; it had also provoked the destructive use of resources.

Why should Russia copy such examples? Fortunately, so far, there is no legally permitted speculation with quotas. Russia should not look for analogies from abroad. She should develop her own tax system, taking into account her needs and opportunities. The very serious arguments in favour of rental taxation of fishing grounds, which are confirmed by nature and by the history of state regulations in Russia, will be reviewed in Part 2.

(To be continued)

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