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Fisheries

of the

Far Eastern Republic

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CHAPTER I

INTRODUCTION

The Russian Far East is surrounded by the seas of Japan, Okhotsk and Behring, and it has a coastline of almost 12,000 miles. Because of the inexhaustible wealth in fish, it became, in the period prior to the World War, one of the important sources of food supply. From the Russian Far East fish and fish products were shipped to Japan, China, Korea, Siberia, European Russia and western European countries. In spite of the primitive methods employed in the fishing industry in the Far East, which are characteristic of the first stages of any industry, the general world situation in the fisheries was such that sales for any quantity of fish were assured. This made certain the influx of capital and the organization of the fishing industry by more modern methods, as well as the organization of industries allied to the fishing industry, such as salting, canning and refrigerating.

In 1914 the Russian fishing industry had at its disposal 22 steamers of the Russian Volunteer Fleet, with a registered tonnage of 42,100 tons. The Amur fishing industry had a great many river vessels which transported from Khabarovsk, Blagoveshchensk, Stretensk and Harbin, about 50,000 tons of fish products to the markets of Siberia and Russia. In 1904 the total number of men employed in the fishing industry was 24,904, of which 11,925 were Russian. The total catch of salmon during 1914 was 96,500,000 pieces. During the year 1912, 796.7 tons of canned fish were exported to the London market; to the other European markets, 39,417.5 tons of fish and fish products and to Japan, 58,140.8 tons. In 1913 the amount of fish and fish products exported reached similar proportions. Exports to the European markets amounted to 56,695.8 tons; to the Japanese markets, 69,775.7 tons, besides shipments of 849.2 tons of herring to Europe and 2,155.4 tons of herring to Japan during the same year.

Indications that sources of fish in other countries were becoming exhausted emphasized the world importance for the immediate future of the fish supply of the Russian Far East. Lack of regulations in the fishing industry in the Russian Far East and the resulting injury to the industry were felt. The Japanese, who, since the Russo-Japanese war, had received great freedom in the exploitation of the Russian fisheries, have been particularly rapacious. But, in spite of this, until the present time there has been noticed no sign of any exhaustion of the fish supply in the Russian Far East. The considerable curtailment in the world supplies of fish nevertheless makes it imperative that the fishing industry be more regulated and that the existing supplies be protected and that scientific methods of breeding various valuable species of fish be applied. During the last few years, because of military intervention in the Russian Far East, which gave the Japanese an opportunity to freely dispose on land and sea with the fishing industry, the Russian Far East has been prevented from carrying out the necessary measures, but there is no doubt that upon the establishment of a normal state of affairs, i. e. after the departure of the Japanese troops, such measures will be adopted and the fish supply of the Russian Far East will be assured a place in the world markets that it deserves.

Inasmuch as the territory of the Far Eastern Republic is surrounded only by the Japanese Sea, and only partly by the Okhotsk Sea (Kamchatka and a larger part of the Okhotsk coast do not belong to the territory of the Far Eastern Republic. The coast line of the Far Eastern Republic stretches from Vladivostok along the Japanese Sea across the Tartar Strait, including Saghalien and along the Okhotsk Sea to Cape Madjalinda), consequently although the natural resources of the Russian Far East cannot be considered as the direct wealth of the Far Eastern Republic, nevertheless the unity which always existed between the various parts of the Russian Far East and the fact that Vladivostok was the principle trading center of that country makes it imperative to consider economically the entire Russian Far East as a single unit. Vladivostok will remain in the future or at least for the next twenty years, the trading center of the entire Russian Far East.

Besides the markets of Japan, Korea and China, as well as the European markets, all of Siberia and European Russia will undoubtedly soon become a vast market for the fish and fish products of the Far Eastern Republic. Even prior to the war, when Russia consumed on the average 3,000,000 tons of meat, Russia consumed about 2,000,000 tons of fish, of which about 1,700,000 tons were obtained within Russian territory. Now, when, in connection with war and revolution, the annual consumption of meat has been reduced to a minimum, the consumption of fish will have to increase in a considerable porportion. This fish will have to be brought from the outside, and in this respect the first place will undoubtedly belong to the fish products of the Far Eastern Republic.

CHAPTER II

SPECIES OF FISH IN THE WATERS OF THE RUSSIAN FAR EAST

In accordance with authoritative Russian investigations, there are 116 different species of fish in the northern part of the Japanese Sea, 121 in the Okhotsk Sea, and 165 in the Behring Sea. Most of the fish found in these countries are as follows:

Sea Fish	Fish Ascending Rivers	Fresh Water Fish	Crustaceans
cod	sturgeon	carp	crabs
herring	dogfish	bream	shrimps
haddock	hansen	pike	
turbot	humpback	ellpont	
flounder	red salmon	grayling	
(various species)		trout	
mackerel	dolly varden	etc.	
	king salmon		
	whitefish		
	smelt		

Fish most valuable commercially are as follows: salmon, codfish, herring also crabs and shrimps. Of commerical value also are: trepangs, oysters, and sea weed (kelp, etc.)

COD—found in great numbers along the entire coast from the gulf of Peter the Great to Behring Sea. Many Japanese are engaged in cod catching on the Russian shores. There is a big future in store for the cod fishing industry. This is also true with respect to the haddock (a member of the cod family, and closely related to the European navaga). The haddock (wak-hnia) can be found in great abundance, and is a valuable fish.

HERRING—along the coasts of the seas of Japan, Okhotsk, Behring, in large quantities. Industry is being conducted in the Japan Sea, Gulf of Peter the Great, Gulf of Tartary, and Saghalien (western coast). Herring is caught during the season beginning with the end of March up to the middle of June.

In the Gulf of Peter the Great it can also be caught from the middle of November to the middle of March. The biggest specimens weigh over one pound; the average weight (abounding in the Sea of Japan) is about one-half pound. Korea and the adjacent part of Manchuria consume a considerable amount, most of the catch coming from the Gulf of Peter the Great. The average annual catch is 75,000,000 pieces, or 17,000 tons, in weight. There is practically no industry on the coast of Kamchatka, Okhotsk Sea and Behring Sea, but the steadily growing demand will, no doubt, lead to the development of the industry there in the near future. The herring is used as food and for fish guano in Japan. The product prepared from the herring is of a high quality. The highest quality herring is of the autumn catch. Russia is a very large consumer of herring, and the Russian market will always be open to the products of the Far Eastern Republic.

FLAT FISH—There are between 15 and 20 species of flat fish, most of them of considerable industrial value. The industry at present is small, but will grow up in the future owing to the increasing demand.

SALMONS—Represent the bulk of the fishing industry in the Russian Far East. The species of salmon are: humpback (gorbusha—local name), “dog salmon” or “chum” (keta), silver salmon (kijuch), red salmon (krasnaya), king salmon (chavicha). The earliest fish is the king salmon, entering the rivers at the middle of May; then come the red salmon, at the beginning of June. The humpback comes at the end of June (in the Amur at the middle of June); the dog salmon at the beginning of July, and silver salmon last in August. In the Amur river the first arrival is the humpback, after the river has been cleared from ice. Then from the middle of July the summer “keta” arrives, and from the middle of August the so-called autumn “keta” makes its appearance. The most valuable Amur salmon is the autumn “keta” which comes up the latest. The summer keta is in the second place. The Kamchatka keta is of about the same quality as that of the Amur. The Okhotsk keta is considered by some people as even superior. As pointed out, the “dog salmon”, (keta), of the Pacific coast of the Far Eastern Republic and that of the adjacent Russian Pacific coast terri-

tory is of a high quality and of great economic value, and must not be confused with the American "dog salmon".

With regard to the quantity of the different species of salmon, caught in the Russian Pacific waters, the first place belongs to the humpback, then the dog salmon, and, following consecutively, the red salmon, king salmon, and silver salmon. The figures of the 1914, 1916, and average for the period 1911-1916, may serve as an illustration:

Fish	1914 %	1916 %	Average 1911-1916 %
humpback	76.7	78.0	47.6
keta (dog salmon)	21.1	15.0	47.0
red salmon	1.5	5.3	4.0
king and silver salmon	0.7	1.7	1.4
Total	100.0%	100.0%	100.0%

As regards the place of catch of salmon, in the most important parts of the Russian Far East, the following figures based on official statistics for the period of 1911-1916 may be given as average:

Place	Average Catch in tons	Percentage
Japan Sea	1,300	0.7
) Amur	53,300)	33.0)
Okhotsk) Okhotsk & Sagalien	8,300)	5.2)
Sea) regions	) 136,600	) 84.8
) Western Kamchatka	75,000)	46.6)
Behring Sea, Eastern	23,300	14.5
Kamchatka		
Total average catch	161,200	100.0

As all the official statistics are based upon the returns of the traders, most of whom diminish the figures in order to avoid taxation, the total figures may safely be increased ten percent.

The above table includes both the coastal waters of the Far Eastern Republic and those of the adjacent Russian Territory closely connected with the economic life of the Far Eastern Republic.

With reference only to the Far Eastern Republic, the average figures are:

PLACE	AVERAGE CATCH (in tons)	PERCENTAGE
Japan Sea	1,300	0.7
Okhotsk Sea		
(Amur)	53,300	33.0
(Saghalin)	2,800	1.7
Total	57,400	35.4%

So the most important coastal territory in the Russian Far East with regard to salmon fishing is the Amur in the Far Eastern Republic, and Western Kamchatka in the adjacent territories.

The future salmon industry must be based not upon the quantity but upon the quality of the product, and attention must be paid in the first place to canning, salting, and refrigeration.

CRABS—Because of their large size and their tasty meat, these are especially valuable. During the last few years they have become of great commercial importance. The principle place of catch is the southern waters of the Far Eastern Republic, the Bay of America up to Cape Povorotni, the Bay Vostok, the Ussury Bay and Amur Bay. Crab fishing takes place in the spring from the middle of March to the end of April, and in the fall from the beginning of September to the middle of November, and in some places even up to December. The spring season is considered the best. Crabs are sold fresh or dried (for Korean and Chinese markets), and canned.

There is no doubt a bright future for the crab industry, which is just beginning to be developed. The markets for them were Korea, China proper, and Manchuria, the people of which used them in the form of dried crab-meat. The canning of crabs began but a few years ago, and the Japanese were very busy in securing considerable amounts of coast sections for crab-fishing. In 1921 on one of the coast sections, near the Povorotni peninsula, there was constructed a plant for canning, and, in a short time, it prepared from the season's yield 1,500 boxes of canned crabs. A plant erected in the same year near the river

Svetlaya, south of Imperial Bay, prepared, during the first half of the season, several thousands of boxes.

SHRIMPS—Are found in great quantities in small enclosed bays, which are thickly grown with seaweeds. They are found especially in the Bay of Strelak, the Bay Vostok, Bay Nakhodka, the southern waters of the Far Eastern Republic. They are gotten, like crabs, in the spring and the fall. Because of their tender and tasty meat and the large quantities in which they are found they are important in the fishing industry.

OYSTERS—In numbers oysters occupy the first place among the mollusks, in the waters of the Far Eastern Republic. Oyster beds can be found in the northern part of the Amur Bay, in the Bay Expedition and Novgorodsk. The oysters are of a very large size. Chinese, Koreans and Japanese buy them in large quantities. The best oysters of the Russian Far East are considered those in the Bay of De-Kastri.

TREPANGS—Fishermen and peasants catch trepangs primarily for the Chinese. They are caught in the spring and the fall. In summer they cannot be caught because they submerge to a very great depth (105—140 feet), and hide in the rocks, while in the spring and the fall they submerge to a depth of from 40—56 feet. The catch is particularly good in the fall. The value of the trepang depends upon the color (when alive). They are white and violet. The violet ones are of the greatest value.

Of sea products of industrial importance is SEA CABBAGE. Sea cabbage is a brown sea weed, of long leaves emanating from a common root which grows from the bottom of the sea. The length of the leaves is about 7 meters and the width about 40 centimeters. The sea cabbage grows mainly in rocky soil, usually near the shore. In some places it is so thick that it is difficult for a boat to pass. This weed grows to a depth of from 3-3½ feet and as deep as 210 feet. There is a great demand for this weed in China, to which it was exported in large quantities. It is found along the entire coast of the Japanese sea, and along the Saghalien Island. In the Bay of Peter the Great, the principal places where sea cabbage is found is the Bay of America, the Bay Vostok, Strait of Strelak, Island Askold, the coastline of the mainland of the Ussury Bay, and other places. The sea-

son for obtaining sea cabbage begins in April and ends in September.

Of some commercial importance also are whales, cachalots, dolphins and seals. Whales and cachalots are found in considerable numbers near the northwest end of Saghalien, and north of the Chaivinsk Bay, near Shantar Islands, and in the Okhotsk Sea, but mostly in the waters of Chukotsk-Anadir region. Sea lions are found mostly in the Chukotsk-Anadir region.

CHAPTER III

FISHING INDUSTRY

of the

FAR EASTERN REPUBLIC

The fishing industry of the Far Eastern Republic is concentrated in the Amur River, Japanese Sea and the Bay of Peter the Great. The Government divided the fishing region into five districts, of which the first three are the most important. The districts are as follows:

- 1—Nikolaevsk
- 2—Southwestern
- 3—Saghalien
- 4—Mariinsk (Lower Amur)
- 5—Khabarovsk

I—The Nikolaevsk District

The Nikolaevsk District includes: all of the lower part of the river Amur, from the village Zimmermanovka to the mouth of the Amur River, a distance of 300 miles, in which district intensive fishing is done; the river Amgun, a tributary of the Amur River, 200 miles long; the Amur Firth, along the mainland coastline, 145 miles long, and the coast of Saghalien for about 135 miles; also the southwestern coast of the Okhotsk Sea, west of the firth, within the limits of the Ud County, with a coastline of 870 miles. This district was almost the first one where the Russian fishing industry began to develop in the Far East, and it has attained great proportions and is the best organized.

About fifty years ago the fishing in this district was very small. Because of the lack of railroads, sales could be made only in local city markets, and these cities at that time, were very sparsely populated, such as Khabarovsk, Blagoveshchensk, Stretensk, Nikolsk, Vladivostok, etc. The principal buyer was the War Department which supplied local troops with Amur fish. Since 1892, when the Japanese market was opened for this

fish, the situation changed. In 1892, 2 Japanese schooners of 160 tons each came for the first time to Nikolaevsk. Ten years later, in 1902, there came to the Nikolaevsk fisheries 52 schooners and 22 ships, with a total tonnage of 12,490 tons, and eight years later, in 1910, there came to the lower Amur and Saghalien coast of the Amur firth 52 schooners and 81 ships with a total tonnage of 36,404 tons (6,622+29,782). These figures show how speedily the export of Nikolaevsk fish for Japanese markets grew.

The following table shows conclusively the general growth in the fishing industry of this district.

Year	Total Catch of Fish in the Nikolaevsk Region		Consumed in Internal Markets tons
	Total Catch tons	Exported to Japan tons	
1892	3,533.3	83.3	3,450.0
1893	2,550.0	250.0	2,300.0
1894	2,516.7	500.0	2,016.7
1895	3,200.0	1,000.0	2,200.0
1896	5,283.3	1,833.3	3,450.0
1897	16,900.0	12,233.3	4,666.7
1898	19,250.0	15,500.0	3,750.0
1899	29,983.3	25,100.0	4,883.3
1900	47,116.7	43,283.3	3,833.3
1901	36,033.3	31,766.7	4,266.7
1902	40,100.0	33,066.7	7,033.3
1903	48,450.0	41,383.3	7,066.7
1904	28,416.7	9,483.3	18,933.3
1905	26,950.0		26,950.0
1906	43,900.0	11,833.3	32,066.7
1907	36,450.0	20,333.3	16,116.7
1908	35,566.7	20,283.3	15,283.3
1909	47,383.3	19,783.3	27,600.0
1910	56,416.7	20,633.3	35,783.3
1911	50,216.7	16,950.0	33,266.7
1912	49,483.3	7,283.3	42,200.0
1913	58,033.0	6,033.3	52,000.0
1914	35,433.3	5,433.3	30,000.0

According to the statistics of the Pri-Amur Department of State Properties in 1913 the fisheries of this district brought to the Government Treasury as payment for the annual rental of these district fisheries 320,796 gold rubles, and to the city of Nikolaevsk during the same year 170,198 gold rubles, a total of 490,994 gold rubles. These districts are divided in the following manner.

Category of Fisheries		No. of Districts	Annual Rent Rubles Kopeks	
National Government				
Fishing Districts	(Long term lease	23	218,024	--
	(One year lease	7	21,354	--
Allied fishing industries	(Long term lease	47	39,484	21
	(One year lease	34	41,934	
Total		111	320,796	21
City Government				
Fishing Districts	(Long term lease	14	112,564	23
	(One year lease	13	56,384	--
Allied fishing industries	(Long term lease	--	--	--
	(One year lease	1	250	--
Total		28	170,198	23
Grand Total		139	490,994	44

The Japanese played an important part in the development of the fishing industry of this district, but this growth could in no way be considered as a gain for the local population, and the state. For a long time Russia received only a small tax (7 kopeks per pood (36.11 lbs.) from Japanese fishing in the lower part of the Amur. The catching and all the work in the canning, etc., of the fish which were caught by the Japanese themselves and also those bought by them were done exclusively by Japanese labor, and all the supplies for the laborers, such as their food, clothing, etc., as well as all the supplies necessary to carry on these industries were brought from Japan. Under such conditions the local Russian population had very little benefit from the constantly growing exports of the Amur fish to Japan. At the same time it was necessary to colonize these fruitful districts and to use the fishing resources for the increasing of the prosperity of the Russian and aboriginal local population. This situation compelled the Priamur Department of State Properties, under whose jurisdiction were four provinces, Amur, Maritime Kamchatka and Saghalien, to work out special provisional regulations for the fishing industry in the lower part of the Amur. In accordance with these regulations, which were formulated in 1900 by the Priamur Governor General, foreigners were abso-

lutely prohibited from fishing in the Nikolaevsk district, and were given only the right to buy fish from the local population and to prepare the fish in special government allotments, which were leased for that purpose. After this, the district entered upon a new phase of development. Because of the demand for fresh fish in the lower part of the Amur, the local population, (aboriginal and peasants), engaged in fishing on a large scale, and later, Russian subjects engaged in this industry on a large scale, and Russian labor was used. The Japanese had to limit themselves to the salting of fresh fish which was sold by the Russians, but the fact that the fishing industry depended upon the Japanese market was used by the Japanese in order to constantly lower the prices of fish. After the conclusion of the Russo-Japanese Fisheries Convention in 1907 when the Japanese received great opportunity to exploit the fishing resources of the Kamchatka-Okhotsk districts, they began to lower the prices still more for the fish purchased by them in the Amur District. This constant dependency of the fishing industry of this district on the Japanese market soon began to be felt, and local fishermen began making efforts to obtain additional markets. The lowering to a considerable degree of the railroad tariffs in 1910 for the transportation of fish to Siberia and European Russia showed immediate results: the export to Russia of valuable fish products from the Nikolaevsk district began to grow and the exports to Japan decreased. In 1912 only 34 schooners and 53 ships, having a total tonnage of 20,536, (4304 plus 16,232), came to the Nikolaevsk fisheries and beginning with 1915, when tremendous quantities of fish were needed for the army and the population at the front, the export to Japan ceased almost entirely. The following two tables show the state of the fishing industry from 1910-1917, the amount of fish exported to Japan, and the amount of fish consumed by the Russian market. The exact data regarding the exports during 1915 and 1916 is lacking, but it is known that almost the entire fish supply was consumed at that time (during the war) by the Russian market.

Fishing in the Amur River (for industrial purposes)

TABLE I

Years	No. of Pieces humpback	Caught summer "chum" (keta)	Fall "chum" (keta)	Manufactured for Russian Markets			caviar in tons
				humpback pcs.	summer "chum" pes.	fall "chum" pes.	
1910	5,076,286	12,536,174	5,814,498	1,005,274	2,497,165	1,975,033	1,397.2
1911	2,621,449	10,749,482	4,686,236	523,338	2,197,168	2,424,890	1,123.5
1912	5,822,729	7,199,309	3,669,073	1,154,913	4,009,574	2,886,869	1,170.6
1913	5,688,233	7,958,579	4,324,187	4,806,629	6,608,804	3,212,499	1,106.7
1914	9,314,643	2,370,880	1,725,305	6,354,906	2,109,806	1,680,538	665.1
1915	285,657	1,560,060	1,632,055	-	-	-	-
1916	2,887,438	182,148	804,234	-	-	-	-
1917	222,585	767,442	1,102,099	-	-	-	230.9

YEARS

TABLE I—Continued

	humpback	Salt and fresh fish (pcs.)		Delivered to Japanese		
		summer "chum"	fall "chum"	humpback & sum. chum	frozen fish	(pcs.)
1910	4,071,012	10,039,101	3,195,506	15,000	43,959	
1911	2,031,625	8,025,216	2,568,798	105,328	129,801	
1912	4,686,016	3,295,603	760,303	102,000	120,000	
1913	881,604	1,231,775	953,688	118,000	158,000	
1914	2,959,737	261,072	39,420	-	14,347	
1915	-	-	-	-	-	
1916	-	-	-	-	-	
1917	13,851	-	-	-	-	

TABLE II

Fishing in the Amur River
by the local population-Russians and natives
for own use and trade purposes.

Years	No. of pieces caught		RESERVED for own use (in pieces)			
	humpback	summer "chum" (keta)	fall "chum" (keta)	humpback	summer "chum" (keta)	fall "chum" (keta)
1909	140,427	5,354,896	3,512,640	601,377	975,625	1,208,115
1910	2,625,198	9,875,155	5,358,831	2,102,579	1,044,330	2,151,493
1911	1,234,962	4,698,752	4,226,296	835,723	750,597	1,246,676
1912	1,706,262	3,289,389	3,294,851	916,653	314,241	1,141,691
1913	1,780,561	3,664,031	3,946,510	956,964	403,499	1,117,204
1914	5,213,619	1,453,711	2,555,367	2,116,799	141,869	718,897
1915	502,401	1,206,952	1,519,709	-	-	-
1916	2,963,734	505,985	568,880	-	-	-
1917	266,124	1,109,556	949,634	116,769	106,075	145,632

TABLE II
(continued)

Years	Fresh Fish Sold (pieces)		Fish Products Sold				
	humpback	summer "chum" (keta)	fall "chum" (keta)	humpback	in pieces summer "chum"	in tons fall "chum"	in tons caviar various fish
1909	129,050	2,832,764	1,290,100	10,000	1,536,507	1,014,425	189.0
1910	522,229	6,321,678	1,716,165	-	2,509,447	1,491,173	170.9
1911	289,899	3,536,114	1,632,714	130,120	412,051	1,346,906	171.7
1912	737,109	2,207,193	1,294,999	51,500	677,955	658,161	211.2
1913	762,537	2,474,372	1,696,305	63,000	786,180	1,133,001	225.8
1914	2,349,709	1,083,232	1,223,144	647,113	226,269	619,346	184.0
1915	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-
1917	69,655	217,980	273,812	79,700	735,500	530,096	77.0
							4,469.0

In 1920, as a result of the aggressive actions of the Japanese Nikolaevsk events began to develop, as a result of which many fishermen have suffered. In the period after the Japanese occupation of Saghalien and the Nikolaevsk region, almost the entire Russian fishing industry was seized by the Japanese Military Command, which substituted Japanese for Russians, and the new temporary masters began to loot the fishing wealth without any control or regulations.

Besides the keta and humpback in the Nikolaevsk District, of great importance is the catch of sturgeon and whitefish in the Amur Firth. The number of sturgeon and whitefish caught is much less than that of keta and humpback, and is concentrated almost exclusively in the hands of the local peasant and aboriginal population. The commercial value of other fish, such as carp, gwiniad, pike, crucian, salmo-thymallus, grayling, brook trout, is not yet great. In the firth are caught smelts, dorse, and herring. All these species are often sold fresh in the local markets. They are also partially sold in the frozen, salted and smoked states. There is also to be found lamprey, of which valuable products can be made, but there is not much fishing of this species because of the lack of demand for it.

In 1907 a great deal of salmon caviar was thrown away, and only since 1908 has the demand for it become such that it began to be prepared in large quantities.

Approximate figures of the catch and of the species for the years 1909-1912 can be seen from the following table:

Kind of Fish	1909	1910 in	1911 tons	1912
whitefish	91.1	216.3	176.8	234.7
whitefish roe	1.0	1.3	1.6	1.6
sturgeon	18.3	48.8	33.3	37.2
gwiniad	36.9	65.5	204.8	79.3
crucian	18.2	19.8	99.4	86.3
carp	21.1	17.4	59.9	55.2
pike	-	11.1	58.9	43.7
salmo-thymallus	1.6	4.2	30.0	1.2
dorse	1.8	26.1	15.1	30.8
smelt	7.6	80.0	34.6	79.7

The canning industry of the Nikolaevsk District did not attain large proportions although it began to develop.

2—The Southwestern District

The Southwestern District stretches from the frontier of Korea to the southern frontier of the firth of the Amur River (along the capes of Lazarev and Pogibi), and embraces the coastline of the Convention Waters, and also the coastline of the Bays which are excluded from the Convention Waters (Bay of Peter the Great, The Imperatorsky Port, Bay of Vanin, etc.) the length of the coastline of the district being about 1300 miles.

The character and the conditions of the fishing industry of this district is divided into unequal parts: the northern, which begins with Cape Povorotny, and which, with the exception of a few bays, contains the Convention Waters of the district; and, secondly, the southern, which consists of the large Bay of Peter the Great and the Bay Posiet, which are excluded from the Convention Waters. In the northern, the Convention part (i. e. the parts in which the Japanese have equal rights with the Russians to the fisheries), the industry is mostly fishing. During the last few years, the catching of crabs and the obtaining of sea cabbage began to develop. The fishing districts here are leased at auction, and the overwhelming majority of the large and small scale fishermen are Japanese.

Of the salmon species, only the humpback and keta are caught here, both species in rather small quantities, and the humpback predominating. The principle catch is the spring herring, which is prepared by the Japanese for fertilizer. In the Bay of Peter the Great, the area of which is about 3,000 square sea miles, there is a great variety of fishing. Besides these, there are caught crabs, shrimps, oysters, trepangs, and sea cabbage is also obtained.

Fishermen of the Bay of Peter the Great have very close connections with the Chinese and Korean markets. The fishing in the district goes on throughout the year. A great deal of the fish is salted for the European market, and the proximity of Vladivostok to the railroad permits the sale of fish in a fresh state or freshly salted state. Almost all the fishermen, large and small, are Russians.

In the Bay of Peter the Great the average catch for the last three years was approximately as follows:

Herring caught by large scale fishermen	45,000,000	pcs.
Herring caught by peasants	40,000,000	pcs.
Various Species	2,500	tons
Sea Cabbage	1,666.7	tons
Shrimps	25	tons
Crabs	5,000	tons
Trepangs	from 1,000,000	pcs.
	up to 4,000,000	pcs.
Oysters and Clams of various sorts	from 1,000,000	pcs.
	up to 2,000,000	pcs.

An approximate idea of the total catch in the entire southern sea district can be obtained from the following table embracing the period from 1910-1919.

Total Catch of Fish in the Southern Sea District

Year	Total Catch	Exported to Japan in tons	For Internal Market
1910	3,100.0	3,100.0	-
1911	5,700.0	4,500.0	1,200.0
1912	5,050.0	3,566.7	1,483.3
1913	5,500.0	3,833.3	1,666.7
1914	7,416.7	4,716.7	2,700.0
1918	8,333.3	5,000.0	3,333.3
1919	16,666.7	7,950.0	8,716.7

3—The Saghalien District

Fishing in the Convention Waters

This district embraces the entire coastline excluding that part of the Tartar Strait which belongs to Nikolaevsk.

The fishing industry in the coastline in the Convention part of the District in 1913 consisted of 9 leases for sea fishing, of which 4 were leased by Russians and 5 by Japanese. Besides those in the Niisk Bay, one fishing district was leased by the Japanese. In 1911, 13 districts were leased; in 1912, 10 districts. During the following years the fishing industry grew. During the years 1911, 1912, and 1913, the following quantities of fish were caught in this district:

Kind of Fish	1911	1912 number of pieces caught	1913
Keta	31,000	16,000	38,000
Humpback	286,000	126,000	183,000
Herring	12,640,000	14,036,000	4,482,000

The total quantity of prepared fish products amounted to:

1911	1,211.5 tons
1912	1,067.9 tons
1913	598.8 tons

The quantity from 583 to 1,350 tons is considered the average catch of this district.

Fishing in the District Outside of the Convention Waters

In 1913 Russian fishermen had leased 4 fishing allotments, of which 2 were for fishing and 2 for fish preparation. The fishing preparation was actually done only on one allotment, (salting). In this district there was purchased from the population 35,000 pieces of keta, and 956 pieces of humpback, all of which was prepared. The fish salted by the Russian method amounted to 79.2 tons, and the amount of roe salted according to the Russian method was 11.7 tons, a total of 90.9 tons. During the year 1912, 1248.3 tons of various fish products were prepared in this district.

The Total Catch and Preparation of Fish

The total catch and preparation of fish in the districts outside of the Convention Waters during the year 1913 were as follows:

fish salted, Russian method	79.1 tons
fish salted by dry method for Japanese market	274.0 tons
caviar salted, Russian method	21.9 tons
fertilizer from herrings	274.0 tons
fish oil	37.6 tons
caviar prepared by Japanese method	3.0 tons
Total for the dist.	689.6 tons

During the year 1911 in the entire district there were prepared for commercial purposes 1317.1 tons, and during the year 1912 1,192.7 tons of fish products. During the latter years the total catch increased, and the number of herring caught was from twenty to twenty-five million pieces, and humpback up to five hundred thousand pieces. These figures are the average for this district.

4—The Mariinsk (Lower Amur) District

This district borders on the lower part of the Amur, from

the village Troitsky to the village Sofiisk, a length of 275 miles, and in the north it reaches Khabarovsk and in the south the Nikolaevsk fishing districts.

The total catch during the years 1911, 1912, and 1913, was as follows:

Kind of fish	1911 number of pieces caught	1912	1913
humpback		450	
summer keta	78,461	117,700	77,460
fall keta	1,118,770	1,033,559	948,056

The quantity of fish products prepared for commercial purposes in 1913 was:

summer keta	189.4 tons
fall keta	2,352.4 tons
salmon roe	130.5 tons
total	2,672.3 tons

Sturgeon fishing was in the hands of the local population, and is shipped to the Russian market. The average annual catch is about 170 tons.

5—The Khabarovsk District

This district embraces 130 miles along the Amur River, from the City of Khabarovsk to the northern border of the Mariinsk District. The Khabarovsk District is very much like the neighboring Mariinsk District.

During the year 1913 the population caught 268,514 pieces of fall keta, and two large scale fishermen caught 10,000 pieces, a total of 278,514 pieces. Of this amount 154,035 pieces were consumed by the local population, and the rest was sold in a fresh and salted state. Sturgeon caught for commercial purposes amounted to 2,865 pieces, weighing 12.1 tons. Kaluga (kind of sturgeon) for commercial purposes amounted to 1,575 pieces, weighing 17.8 tons. These figures have been very much reduced, and in reality they are much greater.

Besides these species the following are caught in this district: pike, bream, carp, silurus, crucian, etc.

As is evident from these figures, which are average for this district, it is not important from a commercial point of view.

The following table shows the quantity of salmon caviar prepared from 1907-1912, in the fisheries located now in the territory of the Far Eastern Republic. The caviar was prepared by the Russian Method.

Year	in tons Total	DISTRICTS				
		Nikolaevsk tons	Marinsk tons	Khabar- ovsk tons	South- western tons	Saghalien tons
1907	200	200	-	-	-	-
1908	808.3	808.3	-	-	-	-
1909	1,616.7	1,616.7	-	-	-	-
1910	2,577.3	2,400.0	160.6	10.0	-	6.7
1911	1,653.2	1,420.0	130.0	41.7	11.6	49.9
1912	1,560.4	1,390.8	122.8	20.0	11.3	15.5

CHAPTER IV

THE FISHING INDUSTRY IN THE TERRITORIES ADJACENT TO THE FAR EASTERN REPUBLIC AND CONNECTED WITH IT.

The fishing industry of the adjacent districts is concentrated in the following regions: Okhotsk, Western Kamchatka, Eastern Kamchatka.

The industry is mostly concentrated in Japanese hands, who have taken great advantage of the rights received by them in 1907, and which were provided for by the Fisheries Convention. In general, the beginning of the fishing industry in this large and rich district began in 1896. The following tables, numbers I and II, indicate: first, the quick development of the industry during the period 1896-1900; and second: the condition of the fishing industry during the period 1910-1915.

TABLE NO. I

Years	fisheries	Quantity of fish pieces	Catch in tons
1896	2	13,292	32.4
1897	4	15,400	348.1
1898	5	329,770	631.6
1899	14	1,000,000	2,083.3
1900	47	3½-4,000,000	7,500.0

TABLE NO. II

Years	Total Catch	Exp. Abroad in tons	For Home Consumption in tons
1910	32,750.0	32,750.0	
1911	71,900.0	64,350.0	7,550.0
1912	47,233.3	39,733.3	7,500.0
1913	46,366.7	41,333.3	5,033.4
1914	95,533.3	82,250.0	13,283.3
1915	132,183.3	54,266.7	77,916.6
1916	133,200.0	61,666.7	71,533.3
1917	124,116.7		
1918	93,350.0	73,683.3	19,666.7
1919	39,950.0	34,166.7	5,783.3

The center of the Russian fishing industry was the Bays and Rivers in which, according to the Convention, the Japanese had no right to fish. There were 34 such bays, and the Japanese were not allowed to fish in any of the rivers. Brief data regarding individual districts will give a general view of the state of the fishing industry and its possibilities:

1—OKHOTSK DISTRICT

The Catch on the Sea Coast (Convention Waters)

Kind of Fish	(4 districts) 1911	(4 districts) 1912	(7 districts) 1913
	Pieces caught		
keta	641,000	730,000	680,000
humpback	-	16,000	204,000
red salmon	38,000	9	-
total quantity of prepared fish shipped from this district	1,729.2 tons	1,891.5 tons	2,004.7 tons

The Catch in the River Districts (Non-Convention Waters)

Kind of Fish	1911	1912	1913
-	in tons		
mostly keta	713.6	1,334.5	1442.3

Total Catch in the Okhotsk District (for 3 years)

	1911	1912	1913
	in tons		
Convention Waters	1,729.2	1,891.5	2,004.7
Non-Convention Waters	713.6	1,334.0	1,442.4
total	2,442.8	3,225.5	3,447.1

Keta occupied the first place, and then the humpback and then red salmon. During the following years, the number of districts increased considerably, and the total catch also increased. The total catch of Keta reached from 50,000.-58,333.3 tons.

2—WESTERN KAMCHATKA DISTRICT

This district includes all of the western coast of Kamchatka

with a length of 800 miles. The lessees are overwhelmingly Japanese. The Russians were mostly concerned in the preparation of caviar. The total catch in the Sea Districts (Convention Waters) was:

Total Catch in Sea Districts (Convention Waters)

Kind of Fish	1909	1910	1911	1912	1913
	109	102	139	133	148
	allot- ments	allot- ments	allot- ments	allot- ments	allot- ments
	number of pieces caught				
keta	2,047,000	7,112,000	2,790,000	3,557,000	4,094,000
humpback	9,702,000	3,313,000	39,128,000	17,048,000	25,501,000
red salmon	527,000	1,298,000	1,528,000	819,000	1,294,000
silver salmon	18,000	615,000	329,000	74,000	68,000
Total pcs.	12,294,000	12,338,000	43,775,000	21,498,000	30,957,000
Total in tons	15,518.2	48,321.7	23,837.3	24,553.3	37,603.7

The sale of caviar prepared in these districts assumed wide proportions in the Russian market, and became one of the principal fish products prepared in the sea districts. The Russian fishermen, primarily the lessees of the river districts purchased it from the lessees of the sea districts. Those Japanese lessees who did not sell the roe to the Russians prepared it themselves by the Japanese method. (Their method of preparing the roe is as follows: the roe is washed out thoroughly, then mixed with a great quantity of salt, and shipped in specially prepared boxes or small barrels.)

In 1913, the Japanese prepared, by their method, 152.4 tons of roe. By the Russian method there were prepared 1,134.5 tons, of which quantity 191.4 tons were prepared in the river districts by Russian fishermen and 943.1 tons were prepared by Russians in the Sea Districts (from roe purchased from the Japanese.

The total catch in the River Districts (Non-Convention Waters)

Kind of Fish	(12 allotments)	(13 allotments)
	number of pieces	
	1912	1913
Keta	246,000	373,000
Humpback	930,000	1,842,000
Red Salmon	480,000	226,000
Silver Salmon	33,000	33,000
Total	1,689,000	2,474,000

In 1911 the catch in the River District was 3,595.1 tons. Of this amount 2,095.6 tons, or 58% was exported to the Japanese market. In 1912, the catch was 2,830.7 tons, of which 835.5 tons, or 30%, was exported to the Japanese market. In 1913, the catch was 4,010 tons, of which 844.7 tons, or 21%, was exported to the Japanese market. The balance went to the Russian market, where the demand was constantly growing. Humpback was the fish mostly exported to Japan.

Total Catch of Fish in the District in 1913
number of pieces

Districts	King salmon	Keta	humpback	Red Salmon	Silver Salmon
Sea Districts (Convention Waters)	5,311	4,094,519	25,501,447	1,294,623	68,274
River Districts (Non Conv. Waters)	4,196	373,812	1,842,090	226,653	33,195
Total no. pcs.	9,507	4,468,331	27,343,537	1,521,276	101,469

Of this Amount was prepared:

Fish for the Russian Market	tons 2,843.9
Canned for European market	1,134.9
Dried, salted, for Japanese market	37,429.4
Roe by Russian method	1,349.3
Roe by Japanese method	152.4
Fertilizer	4.2
Total	42,914.2 tons

In 1911 fishing products prepared from the total catch ----51,779.8 tons

In 1912 fishing products prepared from the total catch ----28,307.6 tons

In 1913, 12 canneries were worked in this district. Of this 2 were on the River allotments. In all of the canneries of the Sea allotments there were prepared 41,186 cases of canned fish and in the canneries of the River allotments, 4,208 cases were prepared. Altogether there were prepared 45,394 cases, weighing about 1,134.9 tons net.

3—EASTERN KAMCHATKA DISTRICT

This district embraces the eastern coast of Kamtchatka and Anadir region, the coastline being 1,840 miles.

Catch in the Sea District (Convention Waters)

Kind of Fish	(38 dist.) 1911	(54 dist.) 1912	(61 dist.) 1913
	Number of Pieces		
king salmon	8,000	29,000	30,000
keta	3,085,000	3,414,000	6,464,000
humpback	1,627,000	497,000	2,624,000
silver salmon	218,000	249,000	98,000
red salmon	750,000	745,000	399,000
Total pieces	5,688,000	4,934,000	9,615,000
Total tons	11,399.2	11,467.5	21,192.0

In 1913 the total fish products amounted as follows:

Fish for the Russian market	249.8 tons
Fish canned for European market	1,030.0 "
Roe prepared by Russian method	699.7 "
Roe prepared by Japanese method	136.6 "
Fish for Japanese market	19,075.9 "
Total	21,192.0 "

Besides, in the canneries of Dembi were prepared 23 cases of canned crabs.

The Catch in the River Districts and Bays (Non-Convention Waters)

Fish	1913 in tons
King Salmon	21.9
Keta	17,584.1
Humpback	11,293.2
Silver Salmon	913.0
Herring	1,479.0

Of this fish was prepared:

Fish for Russian Market	1,405.2 tons
Fish canned for European Market	611.1 "
Fish for Japanese Market	2,260.9 "
Roe prepared by Russian method	198.1 "
Total	4,475.3 tons

In 1912 the total quantity of fish prepared was 3,583.3 tons.

The Total Catch in the Entire District for 1913

Kind of Fish	Convention Waters number of pieces	Non-Convention Waters	Total
King Salmon	30,167	1,315	31,482
Keta	6,464,224	1,055,045	7,519,272
Humpback	2,623,997	647,565	3,271,592
Silver Salmon	98,043	54,780	152,823
Red Salmon	399,000	-	399,000
Herring	-	88,740	88,740

Of this fish the following products were prepared:

Fish for Russian Market	1,655.0 tons
Fish canned for European markets	1,641.1 "
Fish for Japanese market	21,336.7 "
Roe prepared by Russian Method	897.8 "
Roe prepared by Japanese method	136.5 "
Total	25,667.3 tons

In 1911 the total quality of fish products were.....16,387.6 tons
 In 1912 the total quantity of fish products were -----15,662.8 tons

The following table gives the general outline of the production of Russian Roe on the Okhotsk-Kamchatsk Coast during the period 1909-1913.

Year	in tons			Total
	Okhotsk Dist.	Western Kamchatsk	Eastern Kamchatsk	
1909	-	56.6	56.7	113.3
1910	47.6	359.9	353.4	760.0
1911	81.5	699.5	339.9	1,120.9
1912	166.1	808.5	432.2	1,406.8
1913	-	1,134.5	198.2	1,332.6

CHAPTER V

THE JAPANESE AND THE RUSSIAN FISHING INDUSTRY in the RUSSIAN FAR EAST

As has already been shown above, the Japanese market played an important part in the first stage of the development of the fishing industry in the Nikolaevsk District. But the tendency of this market to constantly lower the prices of the fishing products made it finally intolerable for the Nikolaevsk fishermen who were forced to seek the Siberian-Russian markets. With the Japanese thus engaged in fishing in this district, they exploited it intensively, but at the same time were of no usefulness to the local population nor to the state which granted them wide possibilities (not counting the insignificant tax of 7 kopeks per pood, which was collected by the state on all prepared fish products.) The entire work was done by the Japanese with the aid of Japanese labor, and their supplies, beginning with food and ending with clothing, as well as all the fishing implements, were brought entirely from Japan. Thus the Japanese forced the population to feel that they were a strange element interested only in ravaging the wealth of this population. When the Japanese in 1907 received the right to fish along the entire sea coast (excluding the rivers and part of the bays), they made great use of this permission and came in great numbers to the Okhotsk-Kamchatsk region. The leases for fishing districts were let to Japanese and to Russians by auction on equal terms. The nationality of the workers in the sea districts was not restricted, nor was the method of preparation of products in any way restricted, the only exception being the prohibition on making fertilizer of fish of the salmon species. It was permitted to use ships flying a foreign flag in fishing in these districts. While competing with Russians in the auction sales, the Japanese at once found themselves in a more advan-

tageous position. The Japanese were in a much more favorable condition than the Russians because they had at their disposal money, (credit), ships, labor, and fishing implements. The fishing industry is in the same condition as it was in the lower part of the Amur up to 1899, before the use of foreign labor in fishing was prohibited. Japanese were compelled to pay to the Government a little more money; the rental for the lease of the district, and certain taxes, such as stamp duty, trade certificates, taxes for wood cutting and passport visas. But all of these together amounted to from 8 to 15 kopeks per pood of prepared products, which was slightly higher than the former 7 kopeks per pood. This was the only income that accrued to Russia from the Japanese fishing on the Russian sea coasts. The labor was as before, Japanese. Their clothing, food supplies, the salt used in salting, the fishing nets, and in general all the fishing implements were brought from Japan.

How quickly the fishing industry developed may be seen from the fact that prior to the Russo-Japanese war, in the Okhotsk-Kamchatsk District, during the year 1903, there was put up for auction only eight leases, while after the war, in 1907, the number of fishing leases put up for auction increased 24 times, reaching the figure of 192.

As to the number of leases in this region after the conclusion of the Fisheries Convention, the situation was very much the same, as is evident from the following table:

1907	74 districts
1908	100 "
1909	169 "
1910	149 "
1911	205 "
1912	197 "

While fishing in the Russian waters, the Japanese, after supplying their own market, began to supply the Chinese market with Russian fish. In this respect the following statistical data, obtained from the Russian Vice-Consulate at Hakodate, are interesting.

Quantity of Fish Exported by Japanese from Russian Waters to China.

1911	1,599.2	tons
1912	911.5	"
1913	4,752.9	"
1914	13,160.2	"
1915	16,786.7	"
1916	10,317.3	"
1917	11,460.5	"
1918	10,918.9	"
1919	9,345.9	"

The fish that were exported by Japan to China consisted mostly of humpback. Besides these salted fish, the Japanese exported to foreign markets annually more than a million poods (16,666.7 tons) of canned fish prepared also in Russian waters.

But even this was not enough for the Japanese, and after the revolution, and particularly at the beginning of intervention, the Japanese began to demand the right to fish in the rivers and bays which were excluded by the Convention. Besides this, the Japanese demanded many other privileges. Not satisfied with demands only, the Japanese Military Command seized by force almost the entire Russian fishing industry, disregarding the rights of the Russian fishermen or the local Russian population.

In complete violation of the regulations of the Fisheries Convention, the Japanese are fishing everywhere they please, violating all the laws and regulations which were issued for the purpose of the preservation of the fishing wealth. Having destroyed in a rapacious manner their own fishing wealth, the Japanese are beginning to do the same thing to the Russian waters. Only after the departure of the Japanese troops will it be possible to restore the Russian fishing industry.

APPENDIX

THE NUMBER OF FISHING LEASES AND AVERAGE CATCH OF FISH

in the

Districts of the Far Eastern Republic and Those Adjacent
To It.

The number of fishing leases and the average catch of fish during the last years in the districts of the Far Eastern Republic and those adjacent to it may be seen from the following tables:

A—WATERS OF THE FAR EASTERN REPUBLIC

I—Bay of Peter the Great

sea fishing districts	98
sea salting districts	4
trepang districts	9

Boat licenses for fishing:

fish	129
crabs	99
shrimps	39
sea cabbage	99
clams and oysters	49

Total Annual Catch

herring	50,000,000	pieces
fish accompanying herrings	7,000,000	“
crabs	500,000	“
shrimps	25	tons
trepangs	4,000,000	pieces
sea cabbage	667	tons
clams and oysters	1,000,000	pieces

II Tartar Strait

sea fishing districts	30
river salting districts	1
cod fishing districts	16
crab catching districts	28

Annual Product

herring	25,000,000	pieces
humpback	500,000	"
keta	36,000	"

III—Basin of the Lower Part of the Amur River and Its Firth

fishing districts	24
salting districts	18

Annual Product

keta	12,500,000	pieces
humpback	6,000,000	pieces
(quantity of keta reached 15,000,000 and humpback 9,000,000)		

B—WATERS ADJACENT TO THE FAR EASTERN REPUBLIC

I—Northern Coast of the Okhotsk Sea

sea fishing districts	66
river fishing districts	13
river salting districts	28

Annual Product

keta	3,500,000	pieces
humpback	100,000	"
red salmon	75,000	"
silver salmon	25,000	"

II—Western Coast of Kamchatka

sea fishing districts	179
river fishing districts	15
river salting districts	26
cod fishing districts	15
crab catching districts	11

Annual Product

humpback	18,000,000	pieces
keta	3,500,000	"
red salmon	800,000	"
silver salmon	180,000	"
king salmon	3,000	"
herring	50,000	"

III—Eastern Coast of Kamchatka

sea fishing districts	108
river fishing districts	34
river salting districts	29
cod fishing districts	7
crab catching districts	6

Annual Product

red salmon	1,000,000	pieces
keta	3,000,000	"
silver salmon	500,000	"
humpback	1,500,000	"
herring	50,000	"
king salmon	30,000	"

NOTE: The crab catching and the cod fishing districts have just been opened up, and therefore their product has not yet been determined.

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