

Chapter 2

Port Hinterland and Port Space before World War II

2.1. Formation of Port Hinterland

2.1.1. Kushiro before the Development of Modern Transport

Ports were a forefront base for reclamation of frontier zone. Ports had become a gateway which accepted settlers and goods from various places. And reclamation of the interior had progressed by way of these ports (Burghardt, 1971). At the beginning of reclamation, navigable rivers were often used for traffic routes toward the interior. Some river mouth points, where sea routes and river routes connected, had begun to operate as ports, and many urban functions gathered here by incorporating a river valley into the hinterland. Then river mouth points grew up into a port town.

In the eastern part of Hokkaido, the Kushiro River and the Tokachi River are navigable rivers. The Kushiro River starts from Lake Kussharo and flows into the Pacific Ocean. The Kushiro Marshland spreads out around the middle and the lower reaches of this river. So the volume of water is abundant and the gradient is gentle there.

Kushiro city, situated at the mouth of the Kushiro River, was called

“Kusuri-Basho⁴⁾” in Edo era and the Ainu traded with the Japanese here. Fishery products like kelp, pressed dried herring, and salted salmon⁵⁾ gathered around “Kusuri-Basho” were mainly traded. A few deer hides from the interior were also traded. Therefore it is unthinkable that Kushiro River was used for a trade route, though some documents⁶⁾ said that the Kushiro River was used for a route to the interior. At that time the main export was fishery goods and the main import was commodities in the Kushiro port, and its hinterland was limited in and around “Kusuri-Basho” .

After the opening of the Hakodate port in 1859 the amount of the trade in Hokkaido had increased because of the export of kelp to China. The Ainus and people from the southern part of Hokkaido, Aomori, and Akita moved to the Pacific coast in the eastern part of Hokkaido. Some fishing settlements where people engaged in gathering kelp were formed. At that time, most of the products in Hokkaido were transported from small ports scattered in Hokkaido to the Hakodate port, then to the mainland or foreign countries. Because many of the ships were Japanese-style with a low technique, they could not navigate over a long distance. Also, the Hakodate port was the only designated export port in Hokkaido. The Hakodate port was the gateway of Hokkaido and had a prominent position in Hokkaido. Ports in the eastern part of Hokkaido, including the Kushiro port, belonged to the Hakodate port. On the other hand, transport networks on sea and on land connecting small ports were undeveloped and small ports seldom exchanged with each other. And after the opening of the Hakodate port, the amount of the trade of the

Kushiro port had increased, but the main trade goods were still kelp gathered around the port.

From Edo era to early in the Meiji era, there were some Ainu villages called “Kotan” in Kushiro, Akkeshi, Shiranuka, and Tokachi along the Pacific coast of the eastern part of Hokkaido. Akkeshi is the biggest one and Kokutai-temple which was under direct management of the Tokugawa government was built there. And the checking station of the ships was built in 1872. The main work of this checking station was the management of the port and the collection of customs duties and ship taxes. Its extent of jurisdiction was from Cape Erimo to the Kuril Islands. Akkeshi achieved a high position in the eastern part of Hokkaido from this and because Akkeshi had a good harbor which could protect the ships from the high wind and rough waves.

2.1.2. Appearance and Disappearance of Penetration Line

The large-scale reclamation of Hokkaido started in 1872, according to the Ten-year Plan by the Land Development Bureau of Hokkaido. During the period of Three Prefectures and One Bureau (1882-1885)¹⁾, when the new Meiji Government had financial difficulties because of civil wars, the reclamation had made slow progress, but after the establishment of the Hokkaido Government Office in 1886 the reclamation made rapid progress. The full-scale reclamation of the eastern part of Hokkaido started in this period. We can generally see three phases of reclamation in Hokkaido as follows; (1) development of

transport networks by prisoners; (2) settlement of the colonial troops; (3) settlement of the civilians. In the eastern part of Hokkaido we can see it as follows; (1) the Kushiro Prison was established in Shibechea⁸⁾ and prisoners dredged the Kushiro River and opened some roads; (2) the colonial troops settled in Akkeshi; (3) the civilians exploited mines at first, engaged in forestry, and engaged in farm work lastly.

The Kushiro Prison, which led the way in reclamation of the Kushiro River valley, was built in Shibechea in 1885. Shibechea was located at the head of navigation site for small steam ships. Shibechea is the place of contact between river transport and land transport. Therefore Shibechea had a condition to be an interior center. Shibechea was developed based on the prison and had a population of 5,591 which was almost the same number as Kushiro⁹⁾. The prisoners and the staffs of the prison accounted for 46.7% of total number people of Shibechea (Figure 4).

Soon after the establishment of the prison, the prisoners contributed to the construction and the maintenance of the transportation routes to the inland such as the construction of railway or roads and the dredging of the Kushiro River. Especially for roads, many prisoners were engaged in the construction of roads between Shibechea and Akkeshi (1888), Shibechea and Kushiro (1888-1889), Abashiri and Teshikaga (1890), and Fukko and Otsu (1892-1894) and contributed to pioneering of the inland (Figure 5). These roads were about 3.6 m in width in consideration of wagon traffic.

Self-sufficiency was a principle in the prison, but at that time these

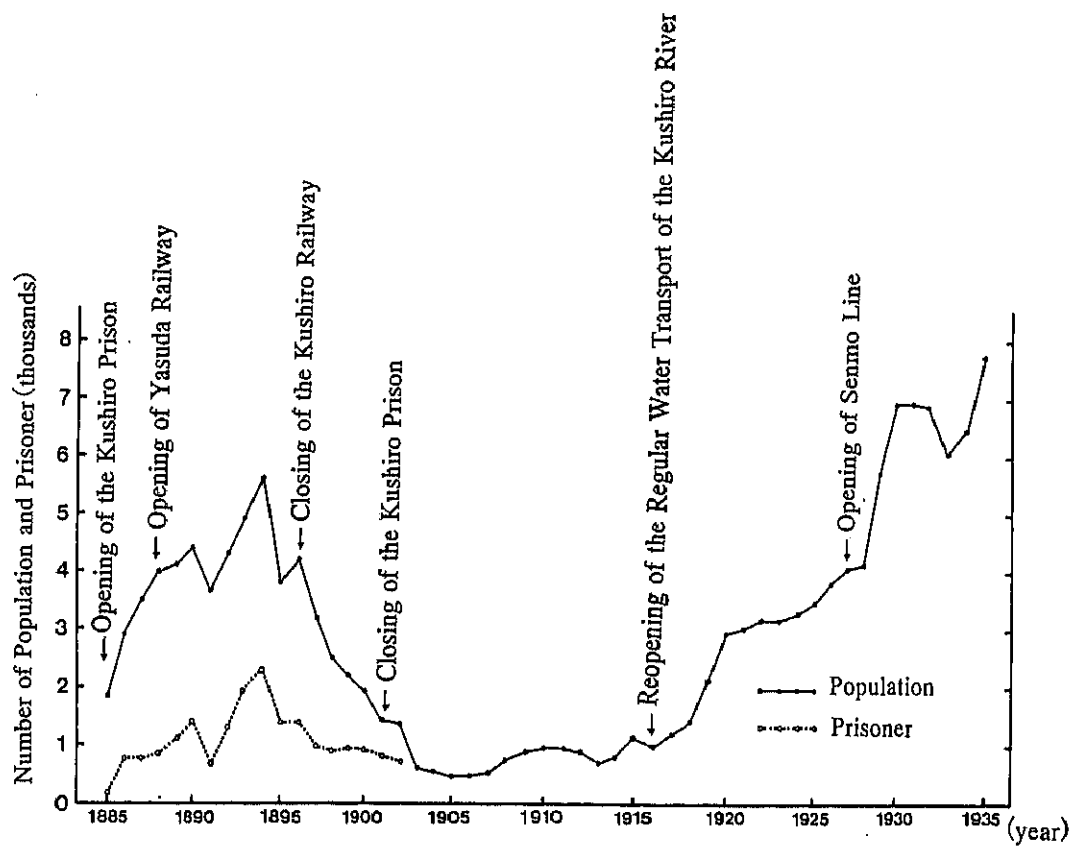


Figure 4 Population Change in Shibeche Town (1885-1935)

(Note) Yasuda Railway renamed Kushiro Railway in 1892.

Sources: Compiled from data in *Shibeche Village Handbook*, 1966, and *Shibeche Town History Vol.1*, 1998.

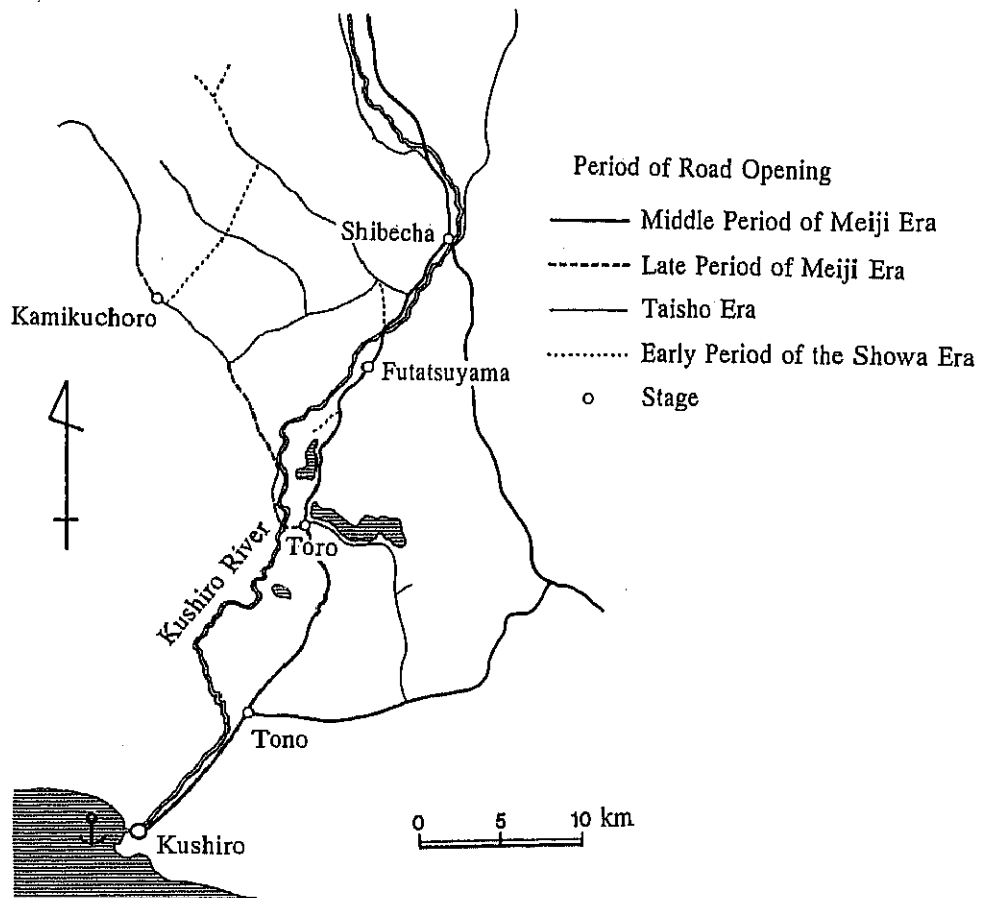
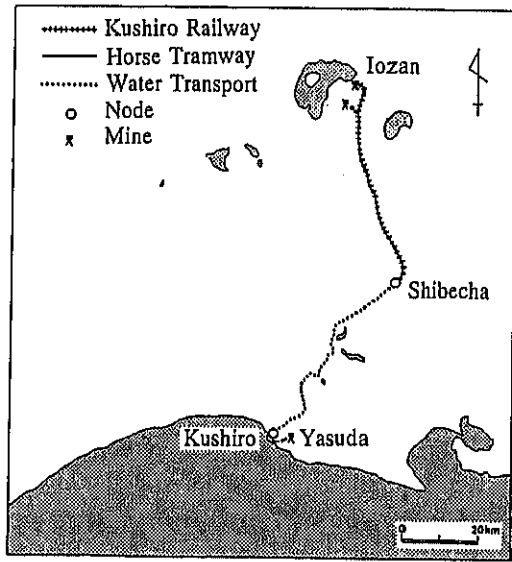


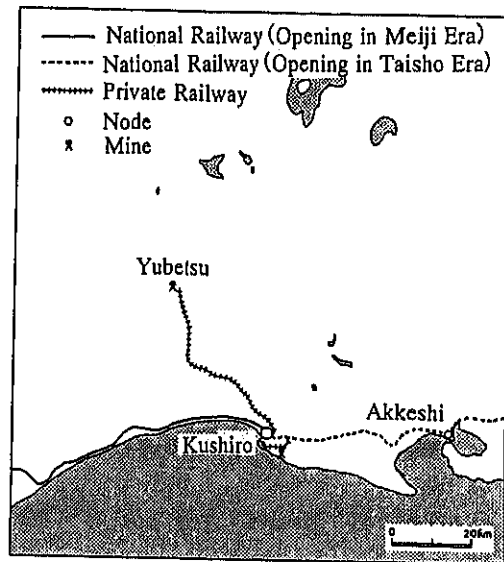
Figure 5 Period of the Opening of Roads in Shibeche Town before World War II
 Source: *Shibeche Town History Vol.2*, 1966.

construction jobs were chiefly done and the reclamation was hardly done. As people living in Shibechea town did not reclaim the land, Shibechea town had a character of a consumption town. People living in Shibechea town had to bring the majority of their commodities including foods from Kushiro. Therefore, water transport of the Kushiro River was also used to transport various kinds of commodities, and the Kushiro port played the role as an import port.

Prisoners in the Shibechea prison were used most in the sulfur mining business in Kawayu-Iozan by the Yasuda financial clique. Kawayu-Iozan, located in the Kussharo Caldera, is an active volcano of the Tholoid type and its sulfur was already being mined by Magoemon Sano who had been a leader in “Kusuri-Basho” since 1876. Land route by horseback and the Kushiro River route were mainly used¹⁰⁾, but the route changed several times. The mining of sulfur in Kawayu-Iozan started on a full-scale in 1887 when its sulfur mining right were transferred to the Yasuda financial clique. The year after the transfer, the Yasuda financial clique constructed the railway (Yasuda Railway) between Kawayu-Iozan and Shibechea for sulfur transportation. This railway was the third constructed in Hokkaido next to Temiya-Sapporo (1880) and Sapporo-Horonai (1882). The sulfur refinery was constructed in Shibechea and refined sulfur was loaded into the small steam ships and was transported to the mouth of the Kushiro River (Figure 6(a)). Sulfur was exported from the Kushiro port to the United States and China by way of the Hakodate port. The Kushiro port was specified as a special export port in 1890. This was largely dependant on the export of



(a) Meiji 20s



(b) Meiji 30s - Taisho

Figure 6 Development of Rail Network in the Meiji Era and the Taisho Era
 Sources: *Shibeche Town History Vol.1*, 1966 and *New Kushiro City History Vol.2*, 1995.

sulfur and kelp. And the Yasuda coal mine was opened at the lakeside of Lake Harutori located eastern part of Kushiro, because coal was needed for sulfur refinement and fuel for steam locomotives or steamships. This coal mine is the origin of the present Taiheiyo Coal Mining Co. Coal was carried from the coal pit to south end of Lake Harutori by small boat (a horse-sleigh was used during frozen periods of the lake) and was carried from here to the port by horse tramway. The Yasuda financial clique used prisoners for sulfur mining, sulfur refinement, construction of the railway, and dredging of the river.

Sulfur transport by Yasuda financial clique formed a penetration line from the Kushiro port to the interior. But at first, Yasuda Railway transported neither passengers nor general cargoes, because this railway was constructed to transport sulfur and commodities for employees. This railway started to transport immigrants and general cargoes without fee because of the requests from immigrants in the interior. Yasuda Railway contributed to the reclamation of the interior, and also was used for a traffic route connecting Kushiro with Kitami-Abashiri district. As the number of passengers carried by rail increased¹¹⁾, the burden of this railway company grew. Then this company got permission from the general transportation in 1892 and changed its name into Kushiro Railway¹²⁾.

Shibecha had grown up as inland node like this and the Kushiro port, that played a role of gateway, had increased the amount of cargoes such as sulfur, kelp, and commodities. And hinterland of the Kushiro port extended to Shibecha and Kawayu-Iozan.

The sulfur mining business by the Yasuda financial clique stopped in 1894 and the enterprise itself closed down in 1896, because of the fall of sulfur market price in the United States and decrease of sulfur in quantity and in quality. As a result, the sulfur refinery in Shibechea and the Kushiro Railway closed down, and regular ship transportation on the Kushiro River stopped. Roads were left without repair and had gone to ruin. The penetration line from Kushiro to the interior disappeared temporarily and Shibechea, which was the interior node, declined. The change of the population in Shibechea shows its decline.

Figure 4 shows the change of the population in Shibechea town from 1885 to 1935. It shows that the start of the population decrease corresponds with the close of Kushiro Railway, that is, the close of the mine in Kawayu-Iozan. Then, 550 prisoners were moved to the Abashiri Prison which was newly set up in order to close the Shibechea Prison in 1901. So the population in Shibechea decreased to 600 in 1903 and 449 in 1906.

One of the factors that population decreased rapidly is that an agricultural reclamation was hardly advanced in Shibechea because of poor climatic conditions and poor soil. For example, no farmhouse was described in the Industrial Annual Reports from 1886 to 1890. After that, eleven families from Kagawa Prefecture immigrated to Toro in 1892 and seventeen families from Yamanashi prefecture immigrated to Isobunnai in 1897 for agricultural reclamation, but most of them were scattered. The Kushiro port in the Meiji era became a gateway to the interior and sent agricultural immigrants to Shibechea like this, but agriculture had not

developed into the major industry.

As Shibechea town depended on the sulfur mining business and the prison and did not have any industrial bases, Kushiro Railway did not continue, though it had a possibility to be used for one part of the Atsumo line connecting with Akkeshi and Abashiri. In spite of the decline of the hinterland, the Kushiro port raised its position as a gateway and was specified for a general trade port with the Hakodate port and the Otaru port in 1899.

The first penetration line and the interior nodes on this line do not necessarily continue or grow into a trunk line, as indicated in Taaffe's diagram. Especially the penetration lines and the interior nodes depending on specific facilities like a mine or a prison do not last long.

2.1.3. Reformation of Penetration Line

The penetration line starting from the Kushiro port had extended toward Tokachi district in Meiji 30s (Figure 6(b)). This new penetration line was the National Railway Kushiro line. This line was opened from Kushiro to Shiranuka in 1901 and to Obihiro in 1905. Because the Kushiro port was the only general trade port in the eastern part of Hokkaido, the Kushiro line was constructed from the Kushiro port, not the Otsu port located on the mouth of the Tokachi River and played the role of gateway of Tokachi River valley. According to the extension of the Kushiro line, the Kushiro port enlarged its hinterland by incorporating the hinterland of the Otsu port. The factor of the

incorporation of the hinterland can be shown by the transport cost differentials. The Kushiro branch office of Yamaken Co. investigated the transport cost of 250 soybean straw bags from Urahoru to Hakodate in 1903. This is shown as follows¹³⁾.

Transport cost from Urahoru Station to Hakodate by way of Kushiro

| | |
|---------------|---|
| 20 yen 50 sen | Transport cost from Urahoru to Kushiro by train, 8 sen 2 rin per 1 straw bag |
| 8 yen 75 sen | Loading cost in Kushiro, 3 sen 5 rin per 1 straw bag |
| 25 yen | Transport cost from Kushiro to Hakodate |
| Total | 54 yen 25 sen |

Transport cost from Urahoru to Hakodate by way of Otsu

| | |
|---------------|--|
| 87 yen 75 sen | Transport cost from Urahoru to Otsu (pack horse or river boat), 87 yen 50 sen per 1 straw bag |
| 30 yen | Loading cost in Otsu, 8 sen per 1 straw bag |
| 40 yen | Transport cost from Otsu to Hakodate |
| Total | 147 yen 50 sen |

As indicated above, the transport cost by way of Urahoru was higher than that of Kushiro by 93 yen. Cargoes which had been transported by way of the Otsu port came to be transported by way of the Kushiro port because of the difference of transport cost. As a result, the Otsu port had

declined gradually and had changed its character from a commercial port to a fishing port. And shipping companies and cereal factors in Otsu closed their offices and opened them in Kushiro. The number of houses in Otsu had decreased from 400 to 150 after the opening of the Kushiro line.

The Kushiro line increased the agricultural productivity in areas along the railway line and also promoted the lumbering business. Figure 7 shows the amount of cargo by articles in each station in the 1904 fiscal year when the Kushiro line opened to Toshibetsu Station. Stations in Tokachi district and Kushiro Station had many departure cargoes and Kushiro Station had many arrival cargoes. Agricultural products sent to Kushiro Station accounted for 63.1% of the total cargo, especially soybean accounted for 55.9%. Many agricultural products were sent from the stations in Tokachi district. And Toyokoro Station and Toshibetsu Station played the role of a transit point of agricultural products. Next to agricultural products, forest products accounted for 22.1% and most of them were transported from Urahoro Station. On the other hand, a lot of freights from Kushiro Station were transported to the stations in Tokachi district and the amount of arrival freights in each station was almost the same. A lot of rice was transported from Kushiro Station and it accounted for 23.1% of the departure freights. The Kushiro port came to have functions of the export port of agricultural and forest products produced in Tokachi district, and also the import port of commodities consumed in Tokachi district by the opening of the Kushiro line.

The Kushiro line opened between Shinnai and Obihiro in 1907 and

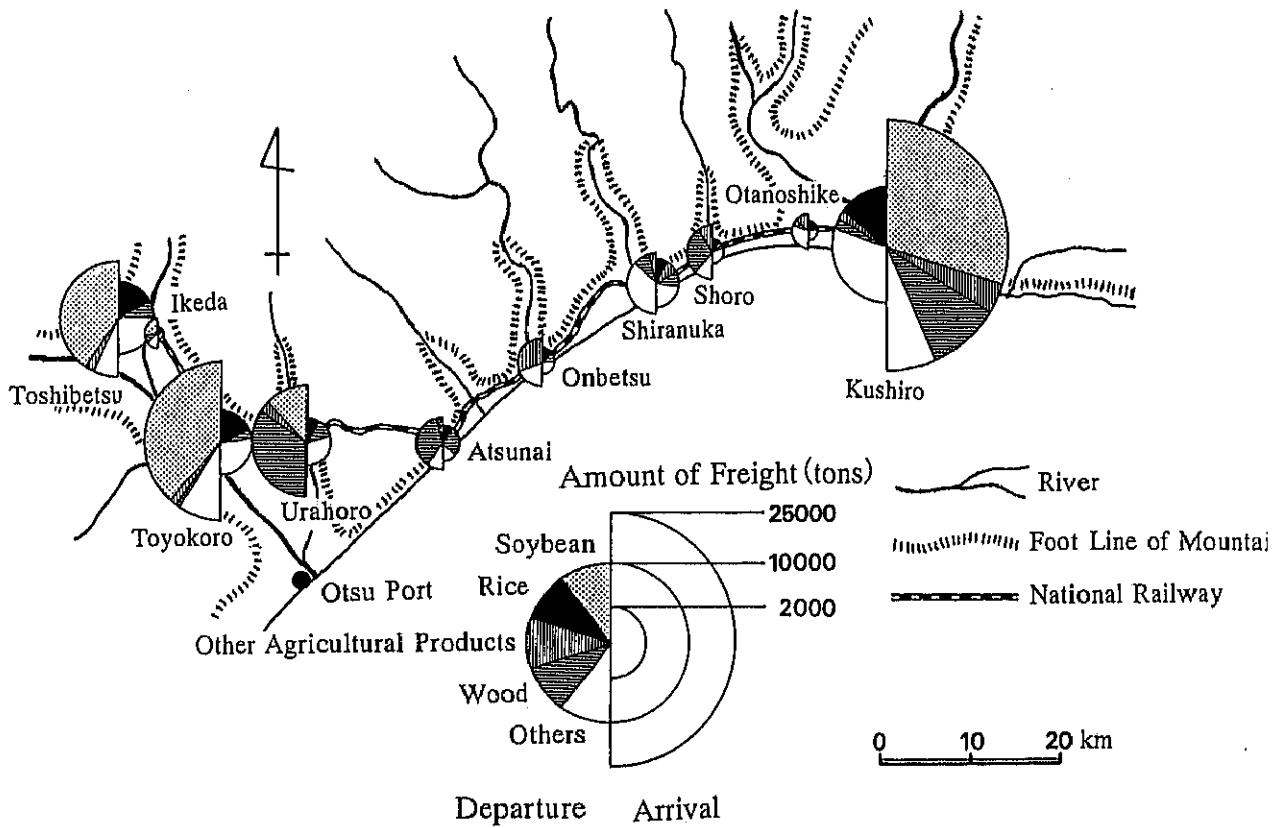


Figure 7 Amount of Railway Freight by Stations on Kushiro Line in 1905
 Source: Compiled from data in *Hokkaido Railway Annual Report*.

the eastern part of Hokkaido was connected with Sapporo and Hakodate with the railway. That is, the Kushiro line was incorporated into the railway networks of the whole of Hokkaido. The Kushiro port started to compete with the Otaru port which had grown up rapidly at that time, but freights in Tokachi district were chiefly transported to the Kushiro port as usual, because of a traffic bottleneck at the Karikachi pass where the Kushiro line crossed over the Hidaka mountain range, and their transport costs were higher. As a result, the Kushiro port monopolized the freights in Tokachi district and had established a superior position in the eastern part of Hokkaido. The National Railway Abashiri line (present Hokkaido Chihoku Kogen Railways) opened from Ikeda to Notsukeushi (Kitami) in 1911 and to Abashiri in the following year. So agricultural and forest products in Abashiri district came to be transported to Kushiro Station, too. The amount of forest products transported to Kushiro Station increased every year. They accounted for 66.4% of the total arrival freights¹⁵⁾ in 1917 and became the most important freight in Kushiro Station.

As for the transportation means between station and reclaimed land, agricultural products and commodities were transported by cart or horse back, and forest products were chiefly transported by flowing water of river. Feeder lines of roads or rivers which connected reclaimed lands with stations had developed like this, and they played the role of the terminal transports of the trunk railways. But the feeder lines for forest products transport did not continue because they finished their role with the exhaustion of the forest resources. And as the Kushiro port is located

on the mouth of the Kushiro River and the Akan River, wood cut down at the basin of both rivers were transported directly to the wood yard around the river mouth by flowing water. In this case, rivers were used for both trunk and terminal transport, but they finished their roles for trunk lines by the appearance of the railway running along the river, and rivers came to have the role of the terminal transports to the rail stations. And the concentration of wood at the Kushiro port brought the establishment of the paper manufacturing plant to Kushiro city in 1920 and the newly produced paper and pulp as the exports.

Then, the National Railway Nemuro line opened from Kushiro to Akkeshi in 1917, and to Nemuro in 1920. The tonnage of ships entering the Akkeshi port had decreased from 3,539 million tons in 1919 to 2,126 million tons in 1921 because of the opening of the Nemuro line. Thus, areas along the Nemuro line were incorporated into the hinterland of the Kushiro port, too. At this point, it can be said that the hinterland of the Kushiro port almost contained Kushiro, Tokachi, Abashiri, and Nemuro districts.

In those days agricultural reclamation in Shibecha had progressed gradually, because of the immigrant plan in 1914, the restart of the regular water transport service on the Kushiro River in 1916, and the start of the truck transport service between Shibecha and Kushiro. But reclamation was still delayed compared with other regions. The development of this region was rapidly promoted after the construction of the National Railway Senmo line which connected Shibecha and Kushiro in 1927. The Senmo line was opened from Kawayu to Shari in 1931.

This means that the penetration line to Abashiri district, which declined at one time, was formed again. This penetration line reformed because abundant forest resources of the Kushiro River valley were paid attention to. Figure 8 shows the amount of freight in each station of the Shibechea town in 1932, soon after the Senmo line opened. Charcoal and firewood accounted for about 47.5%, and wood and log accounted for about 22.6% of total departure freights from Shibechea town. Agricultural products transported from Shibechea town were 762 tons and accounted for 5.8% of total departure freights. While agricultural products arriving at Shibechea town was 1,697 tons and accounted for 20.7% of total arrival freights. The majority of freight transported from Shibechea town were forest products. This means that agricultural reclamation had not advanced yet. But the population of Shibechea town had increased rapidly again by the reformation of the penetration line (Figure 4) .

2.1.4. Formation of Feeder Line

Feeder lines expanded from the penetration line, and connecting points with the penetration line developed to nodes. First of all, Yubetsu Colliery Railway which connected the Yubetsu coal mine in Akan town with Kushiro opened in 1922 (Figure 6 (b)) . This railway, as well as the Yasuda Railway, was set up to transport the mining goods, and a large amount of coal was transported from the Yubetsu coal mine to the Kushiro port. On the other hand, commodities were transported from the Kushiro port to the coal mine because the coal mine had a lot of

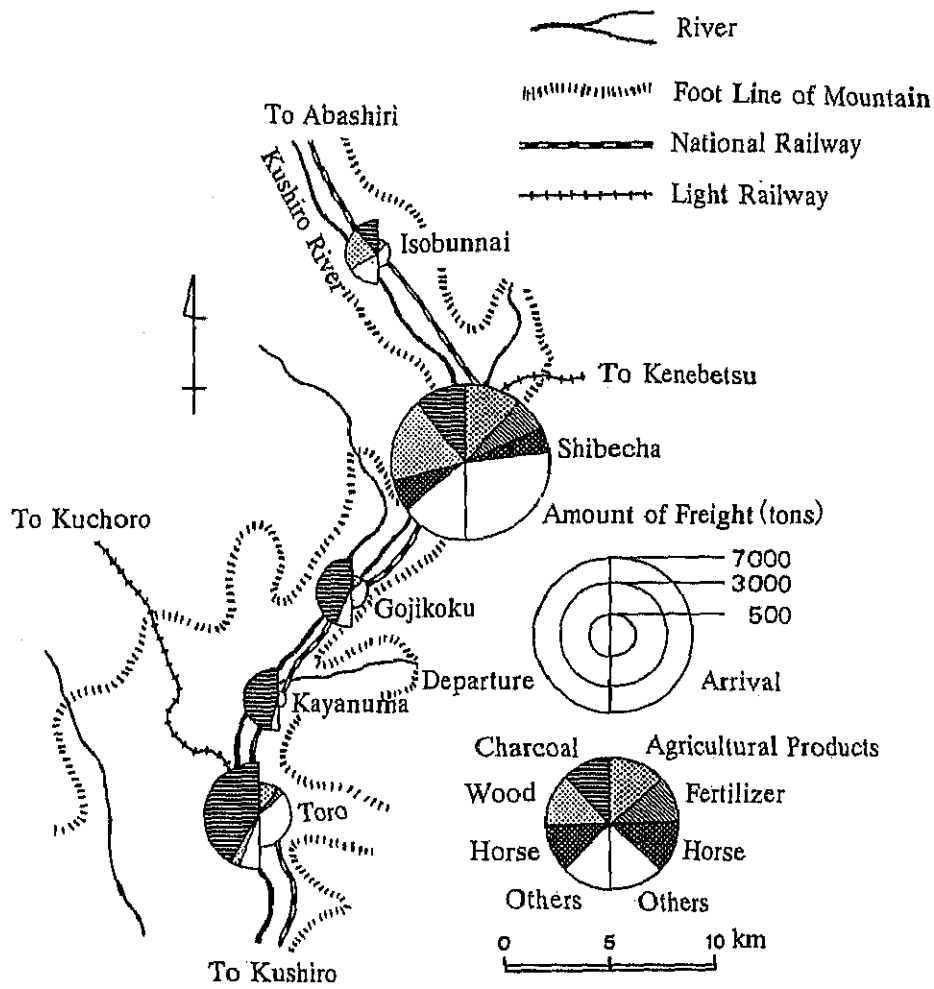


Figure 8 Amount of Railway Freight by Stations on Senmou Line in 1932
 Source: Compiled from data in *Main Freight Statistics Annual Report (Vol.2)*.

consumers. In addition, Yubetsu Colliery Railway transported passengers and wood of the Akan River valley¹⁶⁾ and contributed agricultural reclamation in the interior.

In Shibechea town, a light railway connected Kuchoro with Toro Station of the Senmo line opened two years after the opening of the Senmo line. In the 1932 fiscal year, charcoal and firewood accounted for 71.4% (1473.3 tons), wood accounted for 22.7% (468.2 tons), and cereals accounted for only 4.1% (85.4 tons) of freight transported to Toro Station by this railway. While, total freight transported to Kuchoro was only 178.6 tons, and rice accounted for 57.2% of the freight. Thus, the majority of freight was forest products and the character of this area, depending on natural resources, was the same as the Meiji era. Then, a light railway connecting with Toro and Arekinai was constructed in 1938. This railway chiefly transported milk. Milk was transported to Kushiro and was chiefly processed to the condensed milk and the powdered milk. A light railway expanded to the south and north direction from Toro Station as mentioned above and Toro Station had developed to the traffic node next to Shibechea Station.

For other areas, light railways were constructed corresponding to the development of the coal mining industry, forestry, and agriculture. And a network of feeder lines had been formed. And, the railway network was almost completed at the beginning of the Showa era. The development of the feeder lines promoted the development of mining, forestry, agriculture, and also population growth.

Next, the amount of cargo of the Kushiro port at the beginning of

Showa era is compared with that of the whole of Hokkaido. Figure 9 shows the amount of cargo for each port in 1932. The characteristics of the Kushiro port are as follows: share of mining goods (coal) and forest products for the exports was high and the amount of the exports was large compared with the imports. That is, the Kushiro port had a domestic colonial trade structure specialized to the export of primary products. The amount of cargo of each port in the eastern part of Hokkaido, including the Kushiro port, was overwhelmingly few compared with each port in the west half of Hokkaido. Especially, this was remarkable for the imports. This means that differentials of population and productive capacity between the eastern part of Hokkaido and the western half of Hokkaido were large, though population and productive capacity had increased rapidly in the eastern part of Hokkaido.

2.2. Formation Process of Port Space

2.2.1. Trading Beach Period

The Kushiro port was called Kusurino-tomari in Edo era and the surface of the sea from the Shireto Cape to the Kushiro River mouth was used for anchorage. At that time, mother ships could not reach alongside the beach directly because there were no loading facilities such as quays and loading machines in Kusurino-tomari. The Shireto Beach which extended from a sand bar called "Odaito" to the Shireto Cape was used

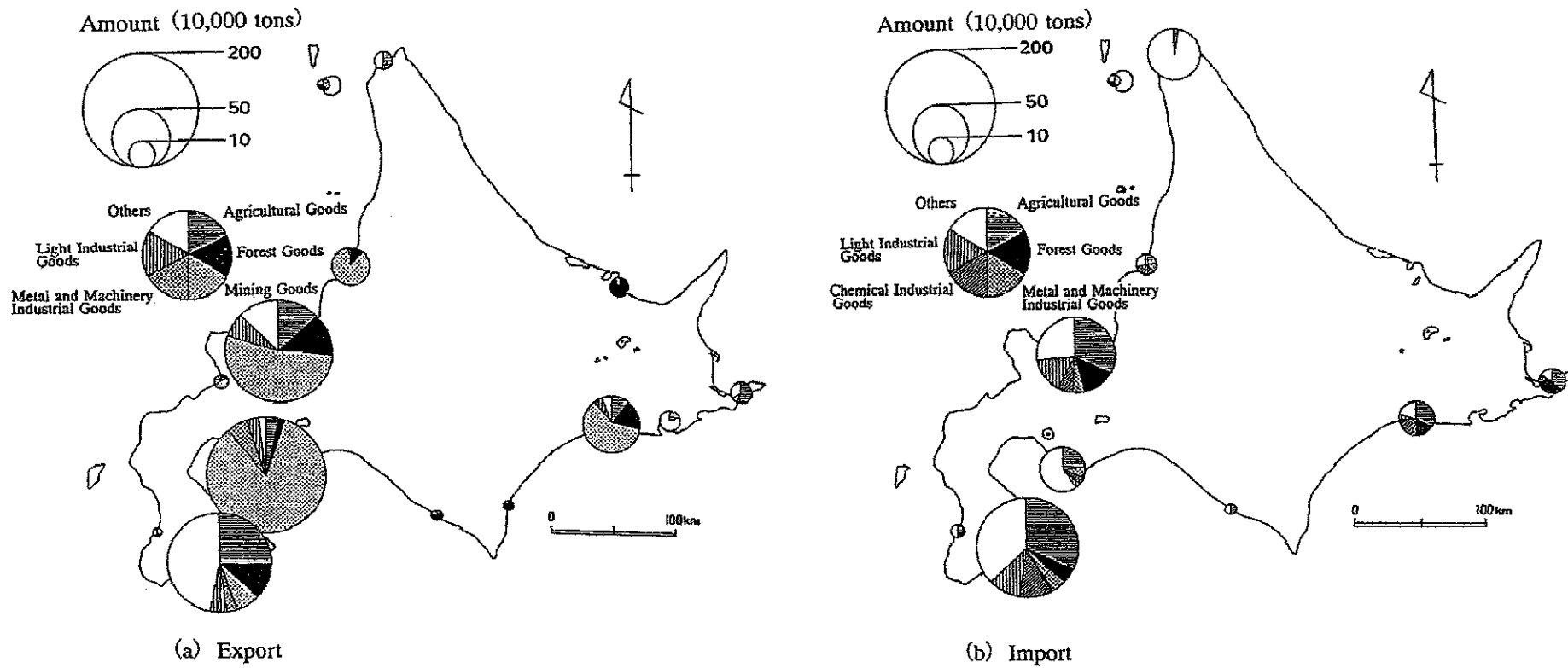


Figure 9 Amount and Type of Cargoes by Major Ports in Hokkaido in 1932

Source: Compiled from data in *Japanese Empire Port Statistics*.

for wharf of barges and cargoes such as kelp and commodities were transported between mother ship and beach by barge. There was an association place called "Kaisho", which was a main facility of management of "Basho", behind this Shireto Beach and a settlement was formed around "Kaisho". Kusurino-tomari took on a fishing village coloration, because there were many fisherman's houses and also the Shireto Beach was used for a storage space of fishing boats and a drying ground of kelp and fish. Thus, at that time, the Kushiro port was a stage on the trading beach.

No big changes were seen in Kusurino-tomari in the early times of the Meiji era. But a large amount of sulfur had been brought to Kusurino-tomari by small steam ship on the Kushiro River since the sulfur mining business by the Yasuda financial clique started in 1887. Figure 10 shows the Kushiro port in 1890 when the sulfur mining business was being done. Sulfur was unloaded at the east side of Odaito and was transported to the Shireto Beach by lorry. This was because the depth of water around Odaito was shallow and the sailing of a small steam ship was difficult. And a horse tramway for coal transport was constructed between the Yasuda coal mine and the Shireto Beach. Coal was transported to the interior with commodities and construction materials. Moreover, the public office of Kushiro-gun and the office of Yasuda were opened in the settlement where "Kaisho" was located before and facilities of commerce and business had accumulated around these offices. Kushiro contained 1,163 houses with 4,232 inhabitants in 1890. On the other hand, cargoes were still loaded on the trading beach

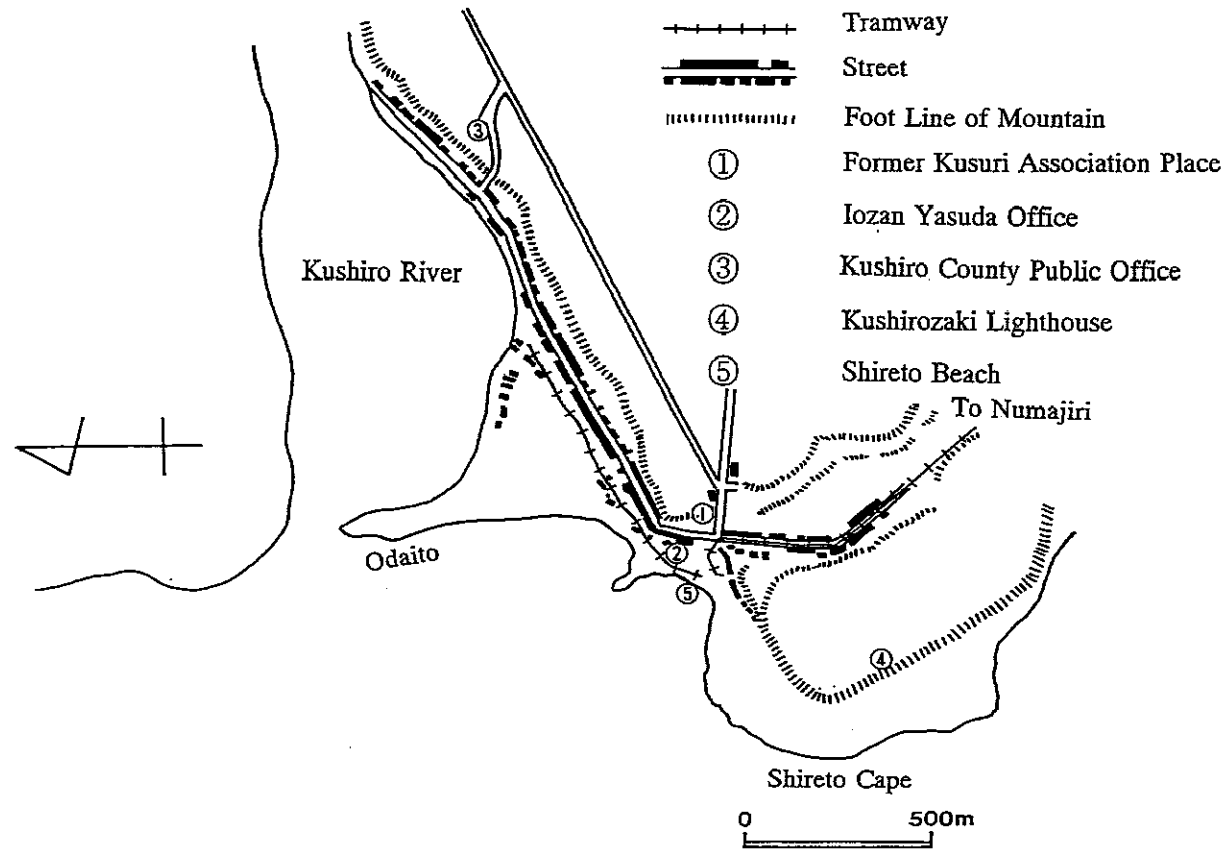


Figure 10 The Kushiro Port in 1890

Source: *Kushiro Port Repair Planning Map.*

and port equipment was almost the same as before, though the amount of cargo had increased. However, the Kushiro cape lighthouse, the meteorological observing station, and the Hakodate customs station were opened and the port function was gradually reinforced.

2.2.2. Barge Quay Period

Town space and port space of Kushiro were greatly changed by the opening of the National Railway Kushiro line in 1904 (Figure 11). Kushiro Station, which was the starting point of the Kushiro line, was set up on the right bank of the Kushiro River mouth. A quay for barge called Saiwai-cho Quay was constructed by reclaiming the riverside. And a freight line connected this quay with the Kushiro Station. As a result, the loading site of the Kushiro port expanded from the left bank of the Kushiro River to the right bank. Houses of railway workers, offices and warehouses of transporters and loading traders gathered around the Kushiro Station and the freight line. And checkerboard streets were newly formed at the right bank of the Kushiro River where the small fishing settlement was located. At the left bank of the Kushiro River mouth, reclamation was completed in 1903. And a new town and barge quay called Irifune-cho Quay were constructed. Quays were constructed in the riverside of the Kushiro River, because at that time there were no breakwaters in the Kushiro port. By the way, Nusamai bridge was constructed at the mouth of the Kushiro River in the previous year of the railway opening and this bridge connected the two towns located on both

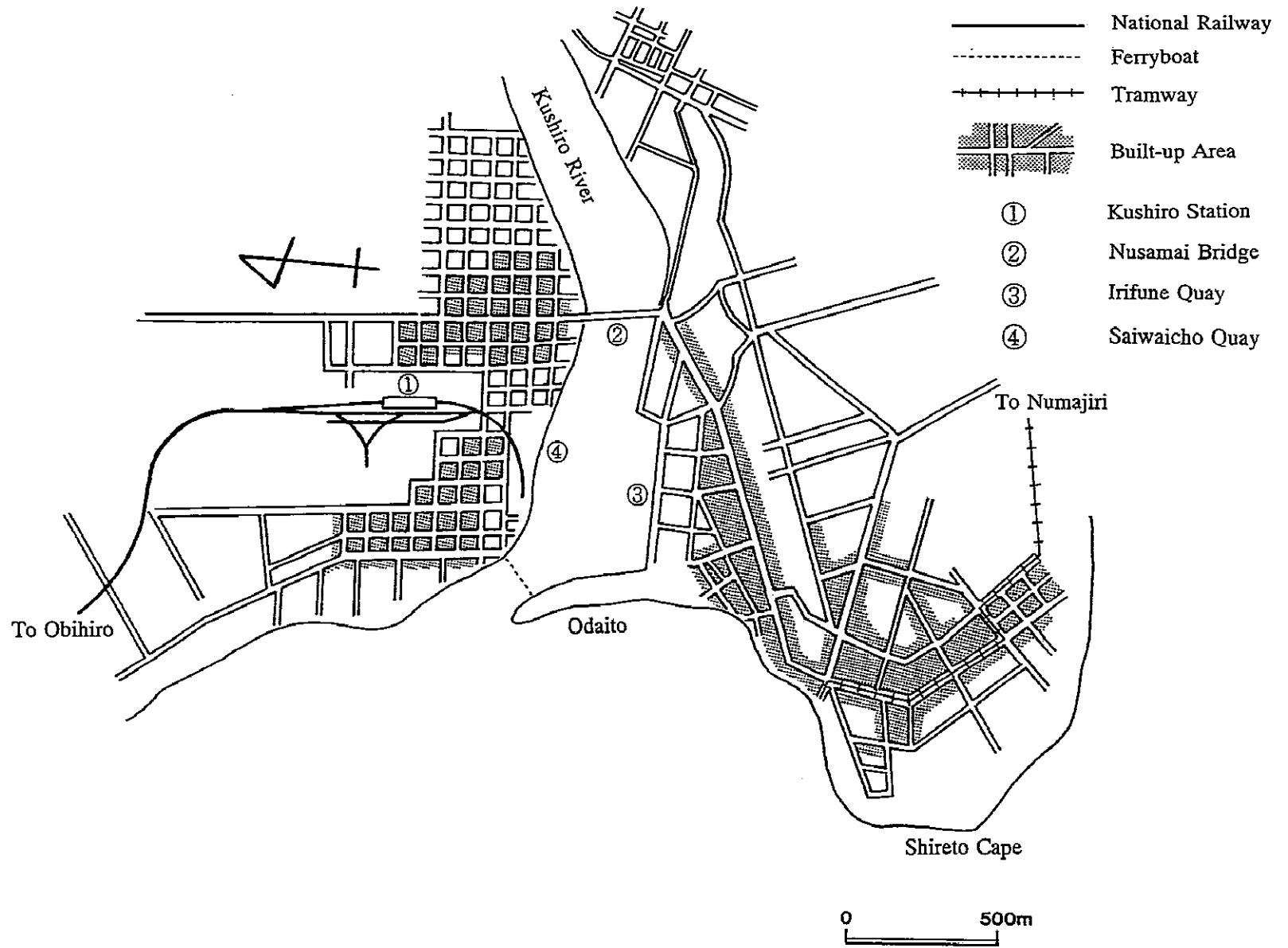


Figure 11 The Kushiro Port in 1903

Source: *Hokkaido Kushiro District Complete Map.*

sides the river. The population increased rapidly after the railway opening. Kushiro contained 2,570 houses with 12,010 inhabitants in 1903.

A large amount of agricultural products and forest products came to be transported from Kitami and Tokachi district by rail in Taisho era. These products were transported to Saiwai-cho Quay. Forest products were kept at the wood yards and agricultural products were kept in the warehouses. The wood yards and the warehouses for agricultural products came to be outstanding at the right bank of the Kushiro River. And a freight line penetrated onto the small pier which expanded to the Kushiro River. Wood and packed agricultural products were loaded directly into barges from freight cars. The Kushiro Station moved to the present position according to the opening of the Nemuro line in 1917 and the pre-Kushiro Station changed its name into the Hamakushiro Station and was used as a freight station.

In Taisho era, some freight lines had developed in the Kushiro port and the percentage of railway space occupying to the port space had increased. For instance, the New Kushiro Station of Yubetsu Colliery Railway was set up at the right bank of the Kushiro River in 1922. Coal from the Yubetsu mine was transported from the quay adjacent to this station to mother ships mooring at anchorage by barge. The Tenneru Station of National Railway was set up on the left bank of the Kushiro River the next year. And some wood was transported from the interior to this station by rail and then to a lumber factory, a wood yard, and a woodworking plant constructed around this station. The wood was made

into rafts at the quay adjacent to the Tenneru Station and was transported to mother ships mooring at anchorage. These quays had been constructed from the mouth of the Kushiro River to the direction of the upstream. It is thought that an easy access with railway and a calm surface of the water in the Kushiro River, which was suitable for the barge transport, were reasons for this. And quays were situated to the point about 4 km upstream, but quays were not located further upstream because the river froze in winter. Thus, the downstream area of the Kushiro River came to play the role of the canal.

By the way, these quays and freight lines behind the quays brought about the separation of the town and the riverside or the seacoast. As a result, the fisherman's houses had moved to near the Nusamai Bridge or the west of the Kushiro port and fishery settlements around the Kushiro River mouth had declined and changed into the general town.

To the above mentioned, barge quays and freight lines connecting with these quays had been constructed one after another, but the construction of a mother ship quay or a breakwater was delayed. Only the South breakwater was constructed in 1926 when the First Stage of Colonization Plan had completed. Because loading ability of the Kushiro port was low like this, some freight was loaded in the Akkeshi port and the Otaru port. The Second Stage Colonization Plan started in 1928. By completing the South Wharf in 1929, coal from Taiheiyo Coal Mine was loaded into a mother ship in this wharf. But after that, no remarkable constructions of port facilities, except for the fishing port in 1937, were seen because of the depression and the war.