Trends in the Japanese-Russian Timber Trade and the Japanese Sawmill Industry Using Russian Logs

by

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日ロ木材貿易と北洋材製材業の現状と課題

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Summary

Although in Russia, forest resources are abundant and Russian wood have large market potential, North American wood has been replaced Russian forest products in the Japanese market. Fundamental problems of the Japanese-Russian logs trade are supply instability, and failure to sort by species and grading. The use of Russian lumber in construction is now quite limited and most logs are sawed into small sectional lumber and are used for non-structural components. Sawmills processing Russian Logs have taken measures to expand market of Russian wood products, such as producing value added lumber, direct dealing with consumers and establishing joint venture companies in Russia. To enlarge the use of Russian wood in Japan, improving the condition of exporting logs from Russia and the processing techniques of Russian logs is needed.

Keywords: Russian timber, Sawmill industry, Wood products market

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I. Introduction

The Japanese economy has largely depended on foreign countries for timber. However, in many of these countries, their forest policy has been moving in the direction of limiting timber harvesting and exports due to concern for the environment and deterioration of forest resources. Under these circumstances, Japan have to use any quality of timber more efficiently. Although in Russia, forest resources are still abundant and Russian forest products have large market potential, North American wood has been replaced Russian wood in the Japanese market since the 1970s. The use of Russian wood now is limited. The purpose of this paper is to present a brief history of Russian-Japanese trade in timber and the current situation of the sawmill industry using Russian logs, and point out problems for the development of the Russian wood market in Japan.

II. History of Russian-Japanese Trade in Timber.

Fig. 1 shows the trend in imports of logs from Russia. Imports of Russian logs began in 1954 and grew dramatically from 1961 due to trade and foreign exchange liberalization. With the high economic growth of Japan, timber demand expanded rapidly, and logs imports from Russia reached over 9 million cubic meters in 1973.

Japan-Russia joint projects have played an important role in this process. After exchanging several missions, the Japan-Soviet Economic Committee was established in 1965. At the second meeting of this committee, held in 1967 in Moscow, the president of Komatsu Industries proposed a barter trade project in which Japan would export machinery to develop Siberian forests in return for Russian logs. Komatsu Industries, primarily a producer of heavy equipment, was actively seeking new foreign markets for its products. After a careful study of the project, an agreement was reached in 1968 and the project began operation in 1969. This project was named the KS project, named after president

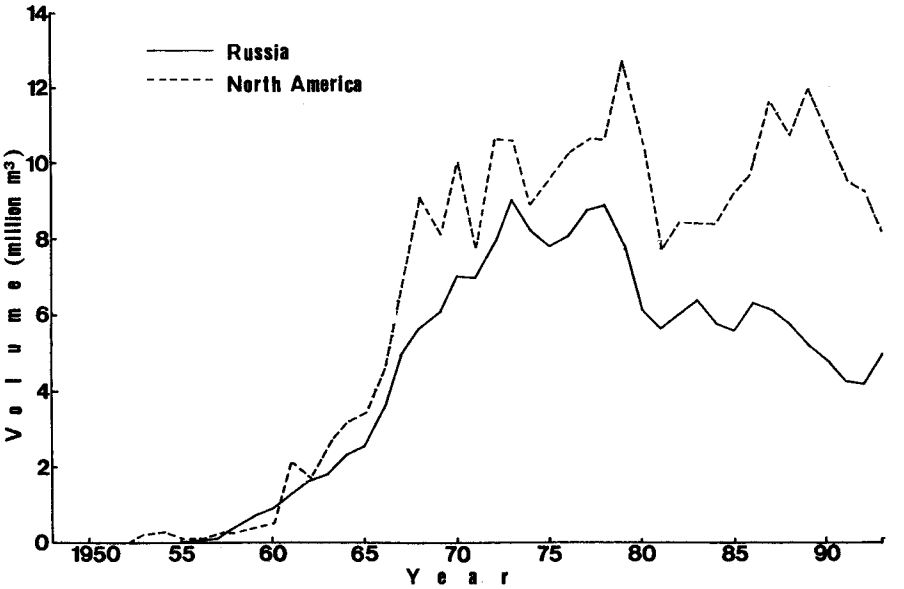

Fig. 1 Trend in imports of logs from Russia

of Komatsu Industries and director of the export section of Soviet Ministry of Trade. Under this 5-year project, Japan exported 133 million dollars worth of machinery and imported 7.6 million cubic meters of logs and thus contributed to increasing imports of logs and exports of machinery (Komatsu Industries Co. Ltd. 1970). After this project, many joint Siberian development projects were launched by the Japan-Soviet Economic Committee (Ogawa & Murakami 1991).

In the wake of the recession of 1974, logs imports from Russia decreased to 7.8 million cubic meters in 1975. The Japanese government then enacted measures to stimulate the economy, which combined with a higher yen, led to a recovery in imports at the beginning of 1976. In 1974, an agreement for the second KS project was reached and operations began in 1975. Under this project, Japan supplied 16.3 billion dollars in bank credits, exported machinery to the Russia, and imported 17.5 million cubic meters of logs over 5 years. As a result, Japan expanded its exports of machinery to the Russia a great deal, but imports of logs did not exceed the 1973 level, and even began decreasing in 1979 (Japan Lumber Importers Association 1983).

Wood prices in Japan began to rise from 1978 due to inflation in the USA and restrictions on Southeast Asian logs exports. The price of Russian logs also rose rapidly. Imports from North America began rising in the latter half of 1979, but the supply of Russian logs did not increase during the same period. As a result, the price of Russian logs continued to increase and reached the same level as American fir and hemlock. Russian logs initially enjoyed a price advantage in the Japanese market, but the rapid rise in price caused Russian logs to become less attractive. Many Japanese sawmills began switching to North American logs in response (All Japan Russian Logs Dealing Association 1992).

Following the second oil shock, the Japanese economy plunged into recession from 1980, further reducing demand for Russian logs. The third KS project, which was suspended as part of economic sanctions against the Russia, was re-started in 1981. However, this project also failed to increase Russian logs imports. In addition, the quality of Russian logs declined remarkably in the early 1980s and yield rates of Russian logs for the sawmill declined 10 to 15 points (All Japan Russian Logs Dealing Association 1992). The composition of species of logs imported from the Russia continued to fluctuate, disrupting the market. These problems accelerated the trend away from Russian logs to North American logs.

Table 1 shows the number of sawmills by origin of logs processed. Clearly, the number of mills sawing Russian logs decreased dramatically from the late 1970s to the early 1980s. The number of sawmills using North American logs also decreased but at a moderate pace with consolidation in the Japanese sawmill industry accounting for much of the decrease. Also, the use of Russian logs was limited to certain regions. Table 2 shows Russian logs imports by region. The number of ports receiving Russian logs shipments decreased rapidly, especially ports away from the Sea of Japan. In 1992 nearly 80% of Russian logs was shipped to ports on the Sea of Japan where proximity to Russia allows relatively low transportation costs; more than 40% was imported to Toyama port which specialize in processing Russian logs.

Japanese traders in Russian logs expected that the system of exporting logs from Russia, and the quantity and quality of Russian logs, would improve with Perestroika and economic reform. However, this expectation has not yet been realized. Demand for

timber in Japan has increased since 1985 with the recovery of the economy, and as a result, imports have also increased. However, because of the economic and social confusion in the Russia, imports from Russia have decreased since 1987. For example, Japanese trading companies contracted to import 6.7 million cubic meters in 1988 with Exportles, a national company which monopolized timber export at that time, but Exportles could supply only 4.5 million cubic meters. This decline in supply caused the price of Russian logs to rise. The relatively high price of Russian logs, in turn, prompted conversion to North American logs at many sawmills. Wood imports from North America have increased rapidly, and reached 8.6 million cubic meters in 1989.

Table 1 Number of sawmills classified by origin of logs used

	Total number of sawmills using imported logs	North American logs	Russian logs
1971	15,514	11,135	7,614
1972	15,782	11,504	7,555
1973	16,378	12,077	7,735
1974	16,383	11,931	7,793
1975	16,356	12,097	7,578
1976	16,228	12,220	7,814
1977	15,902	12,202	7,437
1978	15,639	12,001	7,513
1979	15,180	12,150	6,970
1980	14,685	11,899	6,397
1981	13,775	11,207	5,923
1982	13,104	10,781	5,566
1983	12,518	10,377	5,171
1984	11,952	10,041	4,903
1985	11,019	9,573	4,333
1986	11,019	9,629	4,103
1987	10,890	9,507	4,040
1988	10,782	9,525	3,784

Source: Report on Supply and Demand of Wood, Ministry of Agriculture, Forestry and Fisheries

Negotiations for a 4th KS project ended in stalemate, because the Russian side wanted to change most of the items imported under the project from forest development facilities to machinery for manufacturing furniture. The Japanese negotiators claimed that this

Table 2 Amount of logs import classified by region.

Region	1975		1985		1992	
	Amount of logs imported from Russia (1,000 m³)	Number of port imported Russian logs more than 1,000 m³	Amount of logs imported from Russia (1,000 m³)	Number of port imported Russian logs more than 1,000 m³	Amount of logs imported from Russia (1,000 m³)	Number of port imported Russian logs more than 1,000 m³
Total	7,294	43	5,167	30	3,881	26
Japan Sea Coast	5,143	19	4,001	17	3,021	16
Toyama pref. (Included in Japan Sea coast)	1,354	3	1,534	3	1,571	3
The other part of Japan	2,151	24	1,167	13	860	10

Source: Association of Wood Importers of Japan.

altered the fundamental characteristics of the agreement. Ultimately, the Russia conceded and the agreement was almost concluded in 1991, but because of the collapse of the Soviet Union and problems in Russia, such as import-export taxes and allocation of hard currency to individual companies, 4th KS project has yet to begin.

Although Japanese-Russian logs trade has shown negative trends in recent years, there has been some progress as a result of negotiations between Japan and Russia. Russia is also developing a market economy. Log measurements have improved and the problem of underrun is now minor. Prices are now negotiated for each shipment, reflecting market trends in Japan. However, the fundamental problems of the Japanese-Russian logs trade have remain: supply instability, failure to sort by species and grading continue to be obstacles to an increased use of Russian logs in Japan. Wood imports from Russia increased in 1993, but this was due more to limited supplies and sharply rising prices for North American logs and a decrease in domestic consumption of logs in Russia than improvement of Japanese-Russian logs trade conditions.

III. Use of Russian Lumber in Japanese Construction.

Table 3 shows the trend in lumber shipments from Japanese sawmills by origin. In this table lumber for construction is divided into three types according to size: usually, board is used for fixtures, strip is used for non-structural and sub-structural components, and square is used for structural components. It is clear that shipments of lumber produced from Russian logs have continued to decrease, and have specialized in strips. Until the 1970s, a considerable proportion of Russian logs was sawed into square lumber used for structural components, such as floor joist or common rafters. However, these shipments have been largely replaced by North American lumber because the quality of Russian logs declined while North American logs have retained good quality. Although there is no detailed official data describing the production of lumber produced from Russian logs by item, the Association of Sawmills, which uses Russian logs, surveyed its member companies in 1992, and this survey produced detailed data by item. According to this survey, nearly 80% of lumber produced from Russian spruce and red pine were for

Table 3 Shipping of lumber classified by items and origin of logs Unit: 1,000 m^3

Origin of logs		Total	Construction lumber			Others
			Board	Strip	Square	
1970	North America	10,005	1,151	2,685	4,534	1,635
	Russia	4,781	9,801	521	1,448	832
1975	North America	9,929	1,070	2,886	4,806	1,167
	Russia	4,879	760	1,864	1,653	602
1980	North America	11,381	1,284	3,560	5,029	1,508
	Russia	4,174	601	1,787	1,252	534
1985	North America	8,969	1,032	2,860	3,579	1,498
	Russia	3,014	375	1,405	742	492
1990	North America	12,020	1,322	4,217	4,609	1,872
	Russia	2,606	241	1,336	599	430
1992	North America	11,084	1,246	4,322	4,356	1,660
	Russia	2,180	184	1,178	476	342

Source: Report on Supply and Demand of Wood, Ministry of Agriculture, Forestry and Fisheries

ceiling and furring strips and none were for the square. Because larch does not readily rot and is suitable for sills, 41% of lumber produced from Russian larch were square. However, the use of larch lumber for sills is limited to the coast of the Sea of Japan (Japan Wood-Products Information and Research Center 1992).

The use of Russian lumber in construction is now quite limited. Most logs are sawed into small sectional lumber and are used for non-structural components, especially ceiling and furring strips. A fairly large number of larch logs is processed into square lumber and used for sills, but the market is local. North American lumber is also making inroads into these markets, and Russian lumber is facing strict competition. Moreover, with rationalization of house construction in Japan, the amount of lumber used for non-structural components has decreased (Forest Agency of Japan 1994). Therefore, unless new markets are developed, the demand for Russian lumber will continue to fall, even if producers succeed in defending markets of non-structural components from North American lumber.

IV. Current State of Major Processing Areas of Russian Logs

As mentioned above, the use of Russian logs became limited to certain regions since the late 1970s. In this section we examine the trends and the current state of the major processing areas of Russian logs. The study areas are Niigata and Toyama. Toyama is maintaining a dominant position in processing Russian logs in Japan, while Niigata has reduced its import of Russian logs and is switching to North American logs.

(1) Toyama Port area

As shown in Table 2, Toyama has been highly dependent on logs imports from Russia: in 1992 Toyama imported 41% of logs from Russia. One of main reason that Toyama maintains a dominant position in Russian logs processing is its superior in location. Toyama is located on the coast of Sea of Japan which is close to Russia, and enjoys relatively low transportation costs. Moreover, Toyama is about the same distance from Tokyo, Nagoya and Osaka, three major lumber consuming areas. More than 60% of lumber produced in Toyama has been shipped outside the area, especially, to three major lumber consuming areas (Table 4). This makes it possible to disperse market risks among these areas and to mass produce Russian lumber. Another reason is active investment by sawmills. Sawmills processing Russian logs have invested in plant and stock, and have constructed large scale sawmills specializing in Russian logs. According to Table 5, sawmills in Toyama are generally large-scale, and specializing in processing Russian logs and they have a strong competitive power in the market.

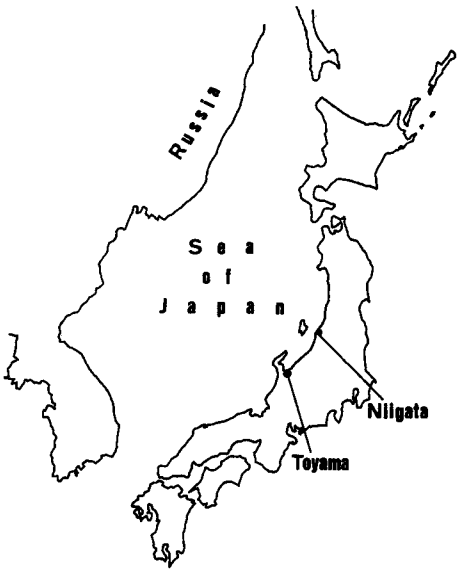

Fig. 2 Location of study

Fundamental directions to deal with the problems of deterioration in quality of Russian logs and the limitation of use in the Japanese market are as follows. First, sawmills began to produce value added lumber. To cope with demand for

Table 4 Destination of lumber shipment from Toyama Pref. Unit: 1,000 m³

	Total	Toyama Pref.	Tokyo area	Nagoya area	Osaka area	Others
1987	950	405	165	130	88	162
1988	979	418	146	147	91	177
1989	957	421	134	139	92	171
1990	961	385	149	154	88	185
1991	923	366	149	135	69	213

Source: Toyama Pref.

high quality control of lumber production, sawmills began to introduce drying equipment and to ship dried lumber. Sawmills also began to introduce facilities to produce laminated wood to expand the use of Russian wood products. Secondly, they began to establish joint venture companies in Russia, intending to secure a supply of high quality logs and to maintain good relations with the Russian forest industry. In general, they participate as a technical supporter for logs processing, while Japanese trading houses invest funds for joint venture companies. Thirdly, sawmills began to strengthen their ability to sell their products. They traditionally sold lumber through dealers, but increase in sales was difficult and the profit rate was low. They began to increase direct dealings with house builders and they tried to increase the number of clients and sales. In conclusion, the sawmill industry in Toyama intends to keep specializing in processing Russian logs and maximize its advantage.

Table 5 Amount of Russian logs received by scale of sawmills

	Toyama Pref. (1,000 m³) (%)	Other than Toyama Pref. (1,000 m³) (%)
7.5~ 22.5 kW	0(0)	6(0)
22.5~ 37.5	10(1)	57(2)
37.5~ 75.0	37(3)	308(12)
75.0~150.0	140(11)	519(20)
150.0~300.0	214(17)	631(24)
300.0~	828(67)	1,066(41)
Total	1,229(100)	2,587(100)

Source: Report on Supply and Demand of Wood, Ministry of Agriculture, Forestry and Fisheries

(2) Niigata Port Area

Table 6 shows the trends in quantities of logs imports to Niigata port. From this table, we can see that imports of Russian logs have continued to decrease while North American logs have increased. Until the 1970s, sawmills in Niigata port area was mainly processing Russian logs. However, under the recession in early the 1980s and economic upheavals after the Plaza Agreement, the structure of the sawmill industry changed

Table 6 Amount of logs imported in Niigata port. Unit: 1,000 m³

	Total	South East Asia	North America	Russia	Others
1987	853	191	147	516	–
1988	819	190	154	475	–
1989	932	183	259	459	30
1990	759	189	187	334	48
1991	773	202	212	311	48
1992	707	178	192	319	18
1993	666	164	154	336	12

Source: Association of Wood Importers of Japan.

dramatically (All Japan Russian Logs Dealing Association 1993). Small-scale sawmills were eliminated and many sawmills changed materials from Russian logs to North American logs to survive, because supply of North American logs was more stable and was of better quality and service. If we compare Niigata port area with Toyama port area, the scale of sawmills in Niigata is generally small and their attitude towards Russian logs imports was more negative. Although most sawmills stopped using Russian logs completely or use them as substitutes, some sawmills still specialize in processing Russian logs. These sawmills covered their decline in profit by enlarging selling section to tide them over the recession. The main reason they still use Russian logs is the abundance of forest resources and a belief in the future.

Since 1993 sawmills have begun to increase the use of Russian logs because of sharply rising prices and an anxiety over the limitation of supplies of North American logs. Some sawmills which specialized in North American logs in the 1980s also began to introduce Russian logs again. These facts show that in Niigata most sawmills use Russian logs compared with other kinds of material. As in the 1980s when the management of sawmills was severe and it was easy to purchase good quality North American logs at relatively low prices, sawmills in Niigata switched from Russian to North American logs. However, as in the 1990s when prices of North American logs became expensive and there was anxiety over future supplies, they began to convert to Russian logs again.

V. Discussion

Since 1993 imports of Russian logs have increased and many sawmills have begun to increase sawing Russian logs. However, under the conditions mentioned above, even if Russia intends to continue to increase logs exports to Japan to earn hard currency, there is a limitation in increasing the use of Russian logs. In fact, because the imports from Russia increased and the supply - demand balance was lost, prices of Russian logs in the Japanese market fell 14% in May 1995. The main reason was the limited use of Russian forest products in the Japanese market due to many consumers thinking Russian forest products is poor in quality and cannot be used for the structural components in housing (Research Institute for Commercial and Industries of Japan 1990). However, under the circumstances that the supply of wood from foreign countries has become limited because of environmental problems, sufficient use of wood materials is needed. The sawmill industry, together with Russian producers, should research the markets and improve the processing techniques of Russian logs to enlarge the use of Russian wood in Japan. To improve the quality of Russian forest products, logs need to be sorted by species and well graded in Russia. As we saw in the case of Niigata, there is a market potential for Russian logs in Japanese sawmill industry. Improving the conditions of exporting logs from Russia would contribute to developing the use of Russian logs in sawmills.

Currently, most timber imported from Russia are logs. However, many Russian-Japanese joint venture sawmills have been established in Russia recently, and they have begun to export high quality lumber to Japan. Exporting value added products will help develop the Russian economy and these joint ventures are valuable resources in terms of improving Russian manufacturing techniques in the long run. The Japanese sawmill industry, which uses Russian logs, should have a long-term strategy to specialize in the internationalization of the forest industry between Russia and Japan.

VI. Acknowledgments

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References

All Japan Russian Logs Dealing Association. (1993) Present Situations of Marketing of Russian Wood. 91 pp, All Japan Russian Logs Dealing Association, Tokyo.

All Japan Russian Logs Dealing Association. (1992) History of All Japan Russian Logs Dealing Association. 445 pp, All Japan Russian logs dealing Association, Tokyo.

Japan Lumber Importers Association (1983) 30 years history. 377 pp, Japan Lumber Importers Association, Tokyo.

Japan Wood-Products Information and Research Center. (1992) Effective Utilization of Russian Wood. 55 pp, Japan Wood-Products Information and Research Center, Tokyo.

Kakizawa, H. (1994) Market Potential for Russian Forest Products in Japan. 42 pp, IIASA working paper WP-94-094.

Komatsu Industries Co. Ltd. (1970) History of Komatsu industries. 358 pp, Komatsu Industries, Tokyo.

Forest Agency of Japan. (1994) Present Situations of Timber Demand and Supply, and Forest Industry, 616 pp, Forest Agency of Japan, Tokyo.

Ogawa, K. and Murakami, T. (1991) Russian Far East in New Epoch. 261 pp, Nihon Keizai Hyouron Press, Tokyo.

Research Institutes for Commercial and Industries of Japan. (1990) Present Situation and Prospects of Manufacturers of Russian Wood. 78 pp, Research Institutes for Commercial and Industries of Japan, Tokyo.

Journal of Russian Wood, All Japan Russian Logs Dealing Association

Japan Forest Products Journal, Japan Forest Products Journal Co.

要　　約

北洋材の日本への輸出は1970年代の初頭をピークとして減少してきた。これは，北洋材が旧ソ連・ロシアの輸出体制の不備により，供給が不安定で，市場動向に対する柔軟性を欠き，また品質管理が劣悪であったことが主たる要因であり，その市場は急速に主として北米材によって侵食されてきた。また，北洋材製材工場数も減少し，輸送コスト面でメリットがある日本海沿岸に限定されるようになってきた。北洋材製材産地では製品の高付加価値化，消費者への直接的なマーケティング，合弁企業の設立などによって市場拡大を図ろうとしている。今後海外からの木材輸入が環境問題などによってさらに制限されることが予測される現在，日ロの協力による木材貿易の改善を通した北洋材有効利用にむけた努力が求められている。