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Wood Raw Material Export Potential

from Russia

Until the Year 2000

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SUMMARY

Trade of forest products with hard currency trading regions can be expected to continue at levels evident in the late 1980s and early 1990s until 1995. Prospects for the period ending in 2000 depend on policies, *inter alia,* to promote investment, and re-investment of hard currency generated by the current owners of the forest sector. Employing the Russian Forest Sector Developmental Model, between 1991 and 1995, it is predicted that 7 million cubic meters of wood fiber will be exported annually to European markets. Approximately 6 million cubic meters are estimated exported to Pacific Rim markets.

The prospects for wood fiber exports between 1995 and 2000 depend on levels of invested capital, alacrity with which domestic costs and prices rise to world levels, and levels of domestic demand. Exports during 1995 and 2000 will fluctuate between 17 million cubic meters to European markets and 12 million cubic meters to Pacific Asian markets, and 2 million cubic meters to European markets and 5 million cubic meters to Pacific Rim markets. Higher exports are potentially possible should the ties binding Russia to other republics of the former Soviet Union not be as strong as those existing before the break-up of the USSR.

Long-term outlook for the volume of wood raw material exports to trading regions not belonging to the former Soviet Union is clouded in uncertainty. Rising domestic consumption levels interacting with the physical limits imposed by the forest resource may effectively limit the contribution which Russia could be expected to make to consumption in regions outside of Russia.

1.0 INTRODUCTION

Political turmoil continues unabated in Russia. The unfolding drama over the distribution of power is generating a paralysis in government which is casting a shadow over the future path which Russia will follow. Regional structures are emerging in the power vacuum further clouding the future.[1] Against the unfolding political turmoil, Russia's economy has continued to deteriorate.[2] Prognosis of the Central Bank is for further

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[1]Stanglin, Douglas and Pope, Victoria, "Two cheers for demokratiya", *U.S. News & World Report,* 5 Apr., 1993, p. 42-52

[2]Gross Domestic Product by the third quarter of 1992 had plummeted to levels less than two-thirds those existing in 1989. Industrial output showed similar declines.

erosion of output with decline on 1992 industrial output in 1993 of between 12 to 15 percent predicted.[3]

The transition from a centrally planned economy to a market economy, to date, has been very painful, not only for the country as a whole, but for the forest sector as well. The declines in forest sector output, first evident in 1990, have continued unabated, affecting both production and export volumes. By 1992, Russian production of had declined to 225 million cubic meters, two-thirds levels attained in 1989.[4] Output of lumber has also suffered steep declines, reaching 50 million cubic meters by 1992, two-thirds of production levels in 1990, and more than 35 million cubic meters below levels achieved in 1988. While data are not currently available which describe other branches of the forest sector, similar declines are expected.[5] A recent forecast of forest sector output in 1993 revealed drops in commercial roundwood output of 18 percent, lumber output of 26 percent, plywood of 16 percent, and particleboard of 17 percent.[6]

The declines visible in the domestic production have been less pronounced in the foreign trade of forest products.[7] While 1992 figures are not yet available, the declines evident between 1990 and 1991 are expected to have continued. In 1991, log exports amounted to 11 million cubic meters, down from 15 million in 1990. Lumber exports have dropped just as precipitously, reaching almost 5 million cubic meters, down from 7 million in 1990.[8] Paper exports have suffered similar declines. In 1991, exports of paper products amounted to 330 thousand tons while 1990 exports were 514 thousand metric tons.[9]

Value of exports have declined (1991 - $50.8 billion; 1992 - $38.1 billion), while estimated external debt has increased (1991 - $54.6 billion; 1992 - $69.1 billion). Retail prices have skyrocketed with inflation estimated to be nearly 800 percent in 1992. Witt, Howard, "Economy: All bets are on privatization", *The Seattle Times*, 28 Mar., 1993, p. A3

[3] *European Market Report*, 7 Jan., 1993, p. 10

[4] *Timber Trades Journal*, 2-9 Jan., 1993, p. 3.

[5] *Finansovi Izvestiya*, 10-16 Dec., 1992, "Promishlennost' Rossii v 1992 godu"

[6] *European Market Update*, 22 Apr., 1993, p. 6

[7] The data presented in this paragraph considers export statistics of products destined for countries not belonging to the former Soviet Union.

[8] *European Market Update*, 11 Mar., 1992, p. 3

[9] *Narodnoye Khozaustvo RSFSR v 1990 g.*, p. 59.

While the decline in industrial output may have been arrested, the lack of historical data describing the forest sector under the current market conditions makes it very difficult to provide a forecast with any certainty the likely direction which production, consumption, and trade of forest products will follow. Even though production has plummeted, volume of exports has fallen less precipitously so. Although desire for hard currency will undoubtedly support current export levels to hard currency trading areas, the prospect for exports to countries belonging to the former COMECON trading bloc and republics of the former USSR is less certain.[10,11] Furthermore, the existence of quotas to limit the volume of exports is a political decision based on the need to support some minimal level of domestic consumption. Applying the export tariffs to forest products acts as a disincentive to export since the tariffs siphon off a portion of the economic surplus which could be used to encourage economic activity within the forest sector. Abnormally high tariffs effectively discourage economic activity.[12] Additionally, the rapidly changing cost and price structure, superimposed on the dissolution of the centrally planned economy makes the selection of future scenarios for demand, price, and cost vectors difficult. While the eventual outcome of the reforms can be agreed upon, whether Russia can successfully navigate the shoals which lie between the centrally planned economy and the market oriented one remains to be seen. Despite the uncertainties painted above, the following paper illuminates some boundaries within which production and export volume of wood raw material can be expected to fall during the course of the decade ending in the year 2000.

Following the introduction, the various components of the Russian fiber supply are identified. The currently and potentially accessible allowable annual cut (AAC) are highlighted followed by a discussion of the economic accessibility of the solid wood component of the Russian fiber supply. The share of the solid wood consumed in the domestic economy is compared to the share which is exported. Finally, a prognosis of the export of wood raw

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[10]Eronen, Jarmo and Simula, Markhu, *Russia and Other Ex-Soviet Republics as Future Paper Markets*, Conference Paper, Prima Conference, Helsinki, Finland, May 12-14, 1993, p. 11

[11]Estimates of sawn lumber exports to the unified Germany from Russia are in the range of 400 thousand to 600 thousand cubic meters. The combined total prior to unification for the two separate Germanys amounted to the range between 1.6 million and 1.8 million cubic meters. (*European Market Update*, 10 May, 1993, p. 1).

[12]*Timber Trade Journal*, 22 May, 1993.

material to European and Pacific Rim markets for the next decade is provided.

2.0 RUSSIAN FIBER SUPPLY

Backman (1993) has identified 5 components to the Russian fiber supply which are presented in **Figure 1.** The major component consists of the principal harvest and non-forest sector harvest, which accounted for 84 percent of the total in 1989. Contributing components include intermediate harvesting, other harvesting, secondary fiber, and imported solid wood raw material and pulp products.

2.1 SOLID WOOD FIBER SUPPLY

The solid wood supply consists of the principal harvest including non-forest sector harvest, the intermediate harvest, and the other harvest, which together accounted for more than four-fifths of the estimated fiber supply in 1989.[13]

2.1.1 Principal Harvest and Allowable Annual Cut

Principal harvest is that portion of the fiber supply which is directly linked to the AAC. Figures which describe the principal harvest since 1990 are not readily available, and in fact, are not very useful when developing an estimate of either physical or economic accessibility.[14] However, Backman (1993) developed a methodology to estimate both the currently and potentially physically accessible AAC, based on levels of principal harvest which took place during the second half of the 1980s.

The forest resource which is available for development in the short to medium term by the forest sector is the portion of the AAC which is currently accessible. Beyond the AAC which is currently accessible lies an additional amount linked to infrastructural development. Backman (1993) has provided an estimate of the current accessible AAC and the potentially accessible AAC segregated into coniferous and deciduous components.

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[13]It is this fiber supply upon which the estimate of economic accessibility is based.

[14]The former Soviet Union up until the end of 1991 effectively functioned under the centrally planned system. As Backman (1993) notes, the degree to which costs and prices determined the level of harvest was not very high. In fact, industrial activity took place under a completely different economic and social system than which Russia is presently operating.

Shown in **Figure 2**, the combined AAC has been estimated at 545 million cubic meters of which 320 million cubic meters consist of coniferous species and 225 million cubic meters consist of deciduous species. Nearly 40 percent of the total AAC is located in European Russia. West Siberia accounts for approximately 20 percent, East Siberia accounts for 30 percent while the Far East accounts for almost 15 percent. Approximately one-half of the deciduous AAC is located in European Russia compared with one-third of the coniferous AAC.

Shown in **Figure 3**, European Russia dominates the other regions in terms of the share of the Russian currently accessible AAC. Accounting for 50 percent of the combined coniferous and deciduous components, 60 percent of the deciduous and 40 percent of the coniferous AAC are situated in European Russia. In European and West Siberian Russia, the coniferous and deciduous components of the currently accessible AAC are nearly in balance. In East Siberia, the deciduous component accounts for only one-quarter while in the Far East, it accounts for some 20 percent of the currently accessible AAC.

Examining **Figure 4** reveals a lack of potential AAC in European AAC. The majority of the potentially accessible AAC is located in West and East Siberia which account for approximately 85 percent of the estimated 119 million cubic meters of potentially accessible fiber.

2.1.2 Intermediate Harvesting

Backman (1993) showed that current levels of intermediate harvesting accounted for nearly 6 percent of the overall solid wood fiber produced in Russia in 1989. The contribution was much higher in the European part of the country where transportational network and markets are more developed. In the European Russia, intermediate utilization accounted for up to 10 percent of the over all fiber resource. **Figure 5** shows distribution of the intermediate harvest in 1989 into geographic and species categories which have been employed to calculate the total currently available fiber supply.

The future contribution to the solid wood fiber potential from this source is difficult to predict within the context of the short to medium term. Only the increase in the European part of Russia has been considered when formulating the estimates of the potentially available fiber supply. The

estimated potential increase in intermediate harvesting is presented in **Figure 6.**

2.1.3 Other Harvesting

Backman (1993) showed that the contribution of fiber from other harvest has only recently exceeded 20 million cubic meters per year. Very little information is available about this harvest which makes projections of future levels difficult. Consequently, contributions to the total fiber supply are restricted to levels evident in 1989, and shown in **Figure 7.** Other harvesting does not contribute to the potentially available fiber supply.

2.2 SECONDARY FIBER RESOURCE

Secondary material, consisting of wood-based fiber and recycled waste paper, has contributed significantly to the fiber supply of Russia. In 1989, it accounted for 16 percent of the fiber supply, shown in **Figure 1.**[15] In 1989, the total secondary fiber available amounted to 75 million cubic meters, the majority of which was located in the European part of the country (**Figure 8**).

Within the analysis provided by Backman (1993), the degree to which both waste paper and secondary wood fiber contribute to the fiber supply of Russia depended on the level of economic activity.[16] Cost of collection was not a factor influencing the degree to which the secondary fiber supply was utilized. Consequently, secondary fiber supply was not considered when developing an estimate of the economic accessibility of the Russian fiber supply within the context of this paper.

2.3 IMPORTED FIBER

While fiber supply can be augmented by imports of wood raw material or products manufactured from wood fiber, historically, these sources have only played a minor role, evident from **Figure 1.** Furthermore, under the current economic conditions existing in Russia, it is unlikely that these sources would contribute in a significant way to the overall fiber supply.

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[15]Waste paper is used solely in the manufacture of paper and paperboard, while secondary wood-based material is used in the manufacture of pulp, particleboard and fiberboard. It is also used for non-manufacturing purposes in heating as a substitute for coal, oil, and gas.

[16]Chip supply was based on the domestic production of lumber while waste paper supply was based on the domestic consumption of paper products.

Import of these products would probably require the use of hard currency which is not in large supply at the present time. Consequently, imported fiber has also been ignored when developing an estimate of economic fiber supply.

3.0 ECONOMIC WOOD SUPPLY

As noted by Backman (1993), under the previous political, economical, and social regimes, economic accessibility of the solid wood fiber supply, let alone the secondary and imported fiber, was difficult to estimate. However, liberalization of costs and prices in Russia at the end of 1991 provided the opportunity to develop an estimate of economical accessibility based on costs and prices.

Backman (1993) divided the solid wood fiber supply into 12 cost categories to provide some indication of the economic accessibility of the solid wood fiber resource. The coniferous component of the solid wood fiber was accounted for through 6 cost categories. Correspondingly, the deciduous component was divided into 6 components as well.

Shown in **Table 1**, a greater share of the solid wood supply was located in the lower three cost categories of Euro-Siberian Russia than the solid wood supply potential in Pacific Asia.[17] In Euro-Siberia, four-fifths of the fiber supply is accounted for by the first three categories while only three-fifths are so accounted for in Pacific Asia. The degree of economic accessibility is further compromised in Pacific Asia because of the higher share of lower valued species in the forest resource which decreases the effective average price received for the forest resource.

Backman (1993) provided an indication of the size of harvest which is economically accessible with a vector of domestic prices and costs characteristic of the middle part of 1992. He found that estimated roundwood supply amounted to 250 million cubic meters of which 190

[17]Backman (1993) after Backman and Waggener (1991) divided Russia into two regions for purposes of developing an estimate of wood raw material exports. European Russia plus West Siberia were amalgamated together into one region, called Euro-Siberian Russia. East Siberia and the Far East were combined together into one regions, called Pacific Asian Russia. **Map 1** shows the different regions of Russia referred to in the text.

million cubic meters were produced in Euro-Siberian Russia and 60 million cubic meters were produced in Pacific Asian Russia.[18]

The long-term solid wood supply is difficult to establish. However, after Backman (1993), imposing a vector of world prices and costs onto the accessible and potentially accessible Russian fiber supply, the economical current wood supply amounts to an estimated 216 million cubic meters (**Table** 2). Pacific Asia accounts for 86 million cubic meters, while 130 million cubic meters are located in Euro-Siberian Russia. Assuming that the potentially accessible roundwood fiber supply becomes accessible over the longer-term, another 49 million cubic meters becomes available, of which 18 million are located in Euro-Siberian Russia and 31 million are located in Pacific Asian Russia. Thus, without any increase in real prices for of roundwood, long-term economically accessible solid wood fiber supply appears in the vacinity of 265 million cubic meters. However, assuming that there is at least a 10 percent increase in real prices over the medium term, economical accessible solid wood supply jumps to 350 million cubic meters, very close to the actual delivered harvest in 1989 of 339 million cubic meters.

4.0 FIBER ALLOCATION

The fiber supply, identified in the previous section, can be consumed locally, exported to foreign markets in Republics belonging to the former Soviet Union, or exported to countries not part of the former USSR. It is believed that the Russian government will follow policies which do not deprive the Russian peoples of domestic consumption. Thus, future consumption levels within Russia are critical when determining the degree to which forest product production may or may not be surplus to domestic needs, and thereby available for export.

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[18]Most significant for long-term prognosis of wood supply, however, is the degree to which the current vector of prices supports replenishment of the capital stock consumed in the production process. As Backman (1993) observed, the current price vectors are insufficient to cover the capital costs connected with the harvesting process. While the relation between current prices and costs (1992) can continue at least for the next ten years as the overhang of capital left over from the previous regime is consumed, harvest levels subsequently will depend on the level of capital investment.

4.1 DOMESTIC CONSUMPTION

Backman (1993) estimated the level of domestic consumption of wood raw material for the first five years of the 1990s.[19] Shown in **Table 3**, domestic consumption of wood raw material amounted to an estimated 207 million cubic meters in the first period. The total wood fiber produced amounted to 227 million cubic meters. Thus, the wood fiber available for export amounted to 19 million cubic meters.

In the next five year period ending in 2000, the size of harvest and surplus available for export fluctuated widely under the three scenarios advanced to represent the range of likely outcomes. Under the pessimistic scenario, 199 million cubic meters were available of which 190 million were consumed domestically. Thus, only 9 million cubic meters were available for export. In the middle scenario, the available fiber amounted to 225 million cubic meters of 204 million were consumed domestically. In this scenario, about 20 million cubic meters were available for export. Under the optimistic scenario, total fiber available leaped to 302 million cubic meters of which only 256 million cubic meters were consumed domestically. Thus, commercial fiber available for export amounted to an estimated 46 million cubic meters.

4.2 EXPORT OF WOOD RAW MATERIAL

The surplus wood raw material is consumed in two ways. First, wood raw material is directly exported to republics of the former Soviet Union. Secondly, wood raw material is exported to Pacific Rim and European markets.[20]

4.2.1 Republic Exports

Raw material fiber exports in the current five year period should amount to an estimated 8 million cubic meters, down considerably from the 20 million cubic meters evident in 1989. Consumption of these products in the

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[19]The fiber supply discussed in this section refers to the share of the harvest identified as harvest in the previous section which has commercial significance, plus the supply of by-product chip material consumed.

[20]Wood fiber is also exported to the republics and other countries in the form of manufactured forest products. In the context of this paper, however, it has been assumed that manufactured products have priority over the export of wood raw material. Consequently, opportunities for substitution between the manufactured product and the underlying volume of wood raw material represented by the manufactured product are not considered.

next five year period is heavily dependent on the expectations of economic activity in the Republics. While exports to the Republics continue at the 8 million cubic meter level in the pessimistic and middle scenarios, export volumes double in the optimistic scenario to 17 million cubic meters. The large increase is brought on by the need to meet increased demand in the Republics interacting with a finite forest resource.

4.2.2 European and Pacific Rim Exports

Export of wood raw material to European and Pacific Rim markets during the current period has been estimated to be 13 million cubic meters, down from 16 million cubic meters in 1989. As shown in **Table 4**, exports to European countries were estimated to be 7 million cubic meters of which nearly 30 percent were higher quality sawlogs. Another 30 percent consisted of chip material while 40 percent consisted of low grade solid wood raw material products. Exports to Pacific Rim markets amounted to 6 million cubic meters, two thirds of which were estimated to be sawlog quality. One-sixth consisted of low grade logs while the remainder consisted of chip material.

The medium term prediction is much more difficult and depends in large measure on the degree to which capital is available for re-investment in the forest sector. Backman (1993) provided estimates for three scenarios with exports ranging from zero in the pessimistic case to 29 million cubic meters in the optimistic scenario. In the optimistic scenario, European markets absorb 17 million cubic meters while the Pacific Rim markets absorb 12 million cubic meters. In the middle scenario, export volume amounts to 13 million cubic meters of which 7 million are exported to European markets and 6 million are exported to Pacific Rim markets.

While the middle and optimistic scenario are plausible, it is more realistic to expect some level of exports to continue to both European and Pacific Rim markets regardless of developments in Russia. Consequently, it is believed that in the pessimistic case, the low estimate should amount to some 7 million cubic meters of which 2 million would be destined to European markets and 5 million would be destined to Pacific Rim markets. **Table 5** shows the export of wood raw material in the second period.

Long term projections are fraught with peril. Rising consumption levels within Russia could effectively siphon off part of the increase in harvest

levels brought on by an expected 10 percent increase in real roundwood prices. Changing trade opportunities between Russia and the republics of the former Soviet Union could also alter the prospects for wood raw material exports to trading regions not belonging to the former Soviet Union. Additionally, as Backman (1993) noted, the total physically available fiber supply, including secondary fiber, when compared to a per capita Russian demand for forest products similar to the United States, only left an estimated 10 million cubic meters of uncommitted fiber. The Russian demand did not include allowances for rising demand in the Republics belonging to the former Soviet Union, thus raising questions of priorities for the uncommitted fiber supply.

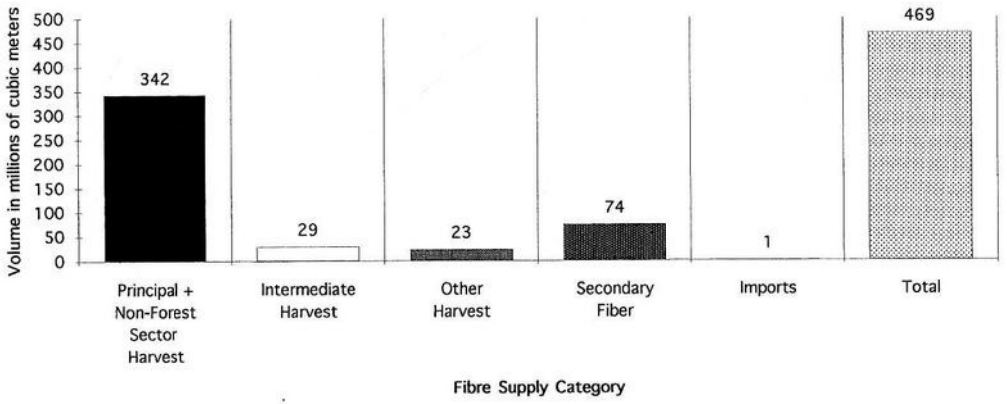
5.0 CONCLUSIONS

Trade of forest products with hard currency trading regions can be expected to continue at levels evident in the late 1980s and early 1990s until 1995. Prospects for the period ending in 2000 depend on policies, *inter alia,* to promote investment, and re-investment of hard currency generated by the current owners of the forest sector. Employing the Russian Forest Sector Developmental Model, between 1991 and 1995, it is predicted that 7 million cubic meters of wood fiber will be exported annually to European markets. Approximately 6 million cubic meters are estimated exported to Pacific Rim markets.

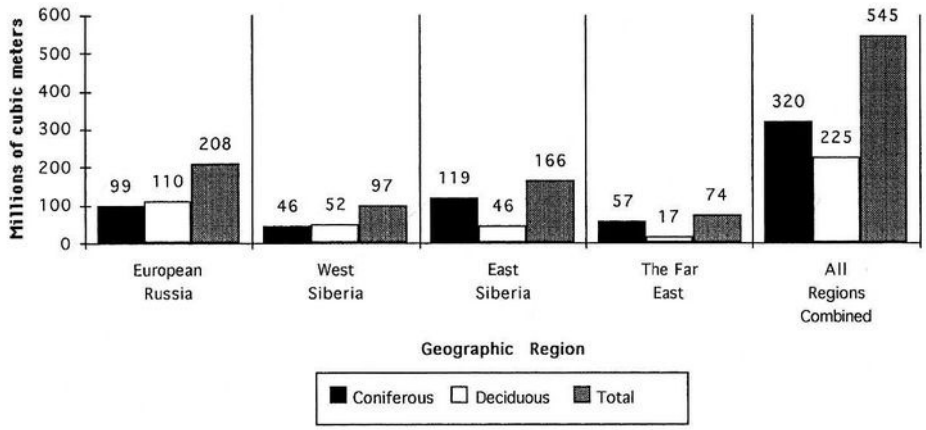
The prospects for wood fiber exports between 1995 and 2000 depend on levels of invested capital, alacrity with which domestic costs and prices rise to world levels, and levels of domestic demand. Exports during 1995 and 2000 will fluctuate between 17 million cubic meters to European markets and 12 million cubic meters to Pacific Asian markets, and 2 million cubic meters to European markets and 5 million cubic meters to Pacific Rim markets. Higher exports are potentially possible should the ties binding Russia to other republics of the former Soviet Union not be as strong as those existing before the break-up of the USSR.

Long-term outlook for the volume of wood raw material exports to trading regions not belonging to the former Soviet Union is clouded in uncertainty. Rising domestic consumption levels interacting with the physical limits imposed by the forest resource may effectively limit the contribution which Russia could be expected to make to consumption in regions outside of Russia.

FIGURE 1 - RUSSIA: Est. Total Fibre Supply in Rdwd Equivalents for 1989

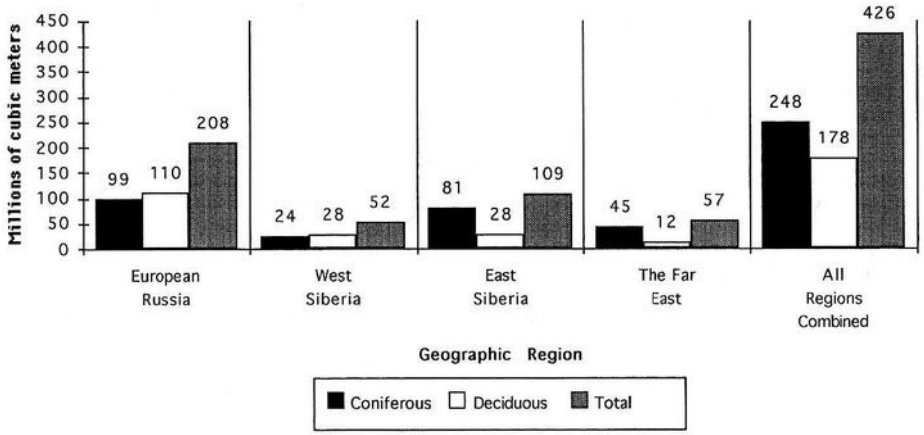


Source: C.A. Backman



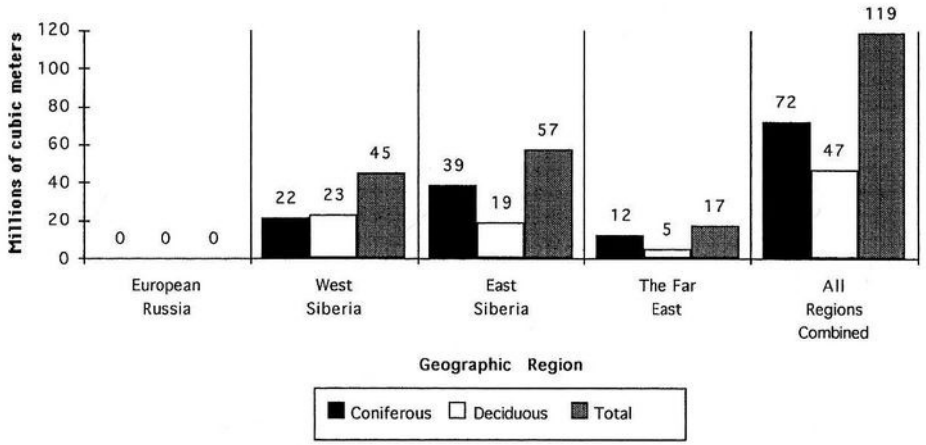
Source: C. A. Backman

FIGURE 2 - RUSSIA and REGIONS: Currently and Potentially Accessible Allowable Annual Cut By Species Group



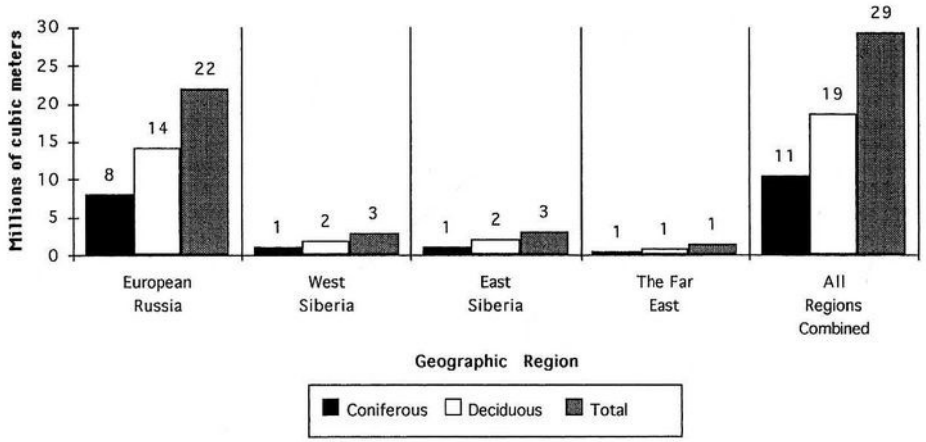
Source: C. A. Backman

FIGURE 4.3 - RUSSIA and REGIONS: Currently Accessible Allowable Annual Cut By Species Group



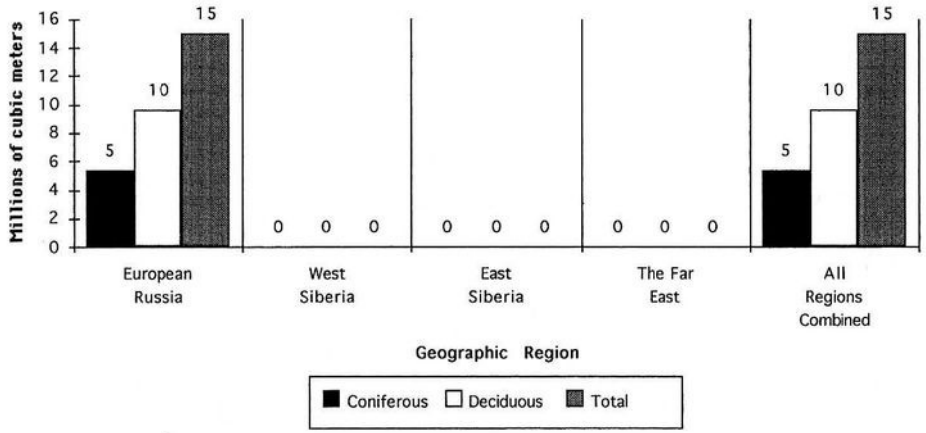
Source: C. A. Backman

FIGURE 4.4 - RUSSIA and REGIONS: Estimated Potentially Accessible Allowable Annual Cut By Species Group



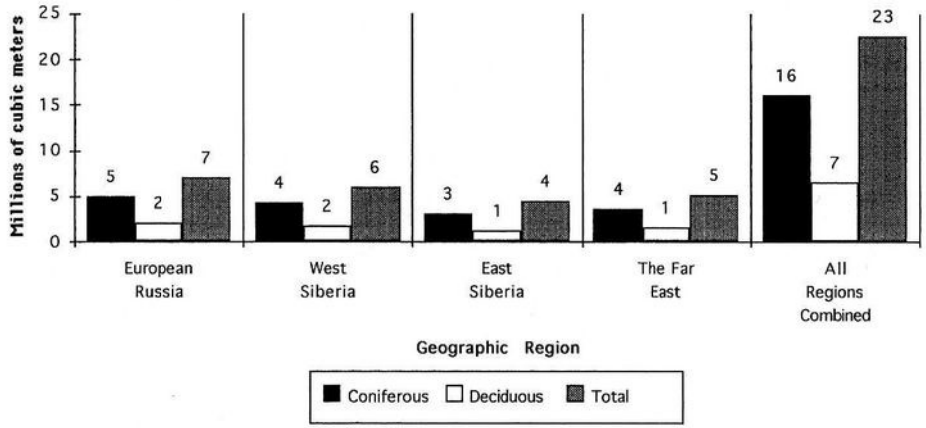
Source: Lesnoe Khozaustvo RSFSR

FIGURE 4.5 - RUSSIA and REGIONS: Intermediate Utilization in 1989



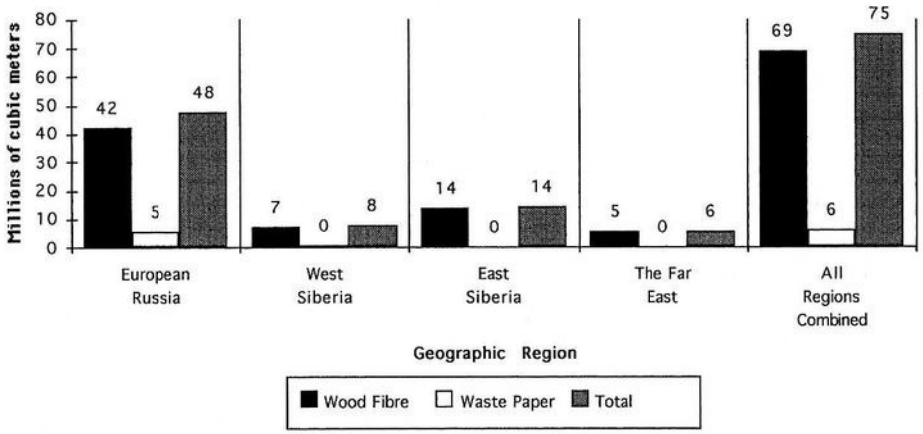
Source: A. Petrov, C. A. Backman

FIGURE 4.6 - RUSSIA and REGIONS: Potential Increase in Intermediate Harvest Volumes



Source: Lesnoe Khozaustvo SSSR, C. A. Backman

FIGURE 4.7 - RUSSIA and REGIONS: Estimated Distribution of Other Harvest by Species Group in 1989



Source: C.A. Backman

FIGURE 4.8 - RUSSIA and REGIONS: Secondary Fibre Supply in Roundwood Equivalents for 1989

Table 1: Economic Accessibility of theSolid Wood Fiber Supply

Euro-Siberian Russia	Pacific Asian Russia
1. 12 percent	4 percent
2. 32 percent	20 percent
3. 37 percent	39 percent
4. 16 percent	28 percent
5. 3 percent	8 percent
6. 0 percent	1 percent

Source: C.A. Backman

Table 2: Estimated Long-Term Economically Accessible Solid Wood Supply in Millions of Cubic Meters Based on Estimated World Prices and Costs 1992 Plus The Effect of a 10 Percent Increase in Prices Levels in ()

Euro-Siberian Russia:

	Currently		Potentially		Total	
deciduous	26	(73)	3	(8)	29	(81)
coniferous	104	(124)	15	(19)	119	(143)
TOTAL	130	(197)	18	(27)	148	(224)

Pacific Asian Russia:

deciduous	9	(15)	3	(6)	12	(21)
coniferous	77	(77)	28	(28)	105	(105)
TOTAL	86	(92)	31	(34)	117	(126)

Russia:

deciduous	35	(88)	6	(14)	41	(102)
coniferous	181	(201)	43	(47)	224	(248)
TOTAL	216	(289)	49	(61)	265	(350)

Source: C.A. Backman

Table 3: Domestic Consumption of Wood Raw Material in MM Cubic Meters

Period One:	
Supply Available:	227 MM
Domestic Consumption:	207 MM
Available for Export:	*20 MM*
Period Two:	
Pessimistic:	
Supply Available:	199 MM
Domestic Consumption:	190 MM
Available for Export:	*9 MM*
Middle:	
Supply Available:	225 MM
Domestic Consumption:	204 MM
Available for Export:	21 MM
Optimistic:	
Supply Available:	302 MM
Domestic Consumption:	256 MM
Available for Export:	*46 MM*

Source: C.A. Backman

Table 4:

NEAR TERM WOOD RAW MATERIAL EXPORT POTENTIAL

1. **Estimated Annual Raw Material Exports Until 1995:**

- **Total** — **13 MM cubic meters**
  - **high grade** — 6 MM cubic meters
  - **low grade** — 7 MM cubic meters

- **European Markets** — **7 MM cubic meters**
  - **high grade** — 2 MM cubic meters
  - **low grade** — 5 MM cubic meters

- **Pacific Rim Markets** — **6 MM cubic meters**
  - **high grade** — 4 MM cubic meters
  - **low grade** — 2 MM cubic meters

Table 5:

SHORT TERM PROGNOSIS OF WOOD RAW MATERIAL EXPORTS

1. Estimated Annual Raw Material Exports From 1995 until 2000

	High	Low	Middle
Total	29 MM	7 MM	13 MM
European Markets	17 MM	2 MM	7 MM
Pacific Rim Markets	12 MM	5 MM	6 MM

MAP 1 : Regions of the Former Soviet Union