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The Russian Forestry Sector Outlook and Export Potential for UnProcessed Logs and Primary Forest Products Through 2000

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Executive Summary

While the Russian Republic represents one of the largest single holdings of forests and forest inventory, the potential of this resource is far from fully realized. In part, this is due to the huge size of the Republic, and the overall pressures that have taken priority over the development of the forestry and forest products sector historically.

In more recent years, the ongoing political and economic disruptions associated with political and economic reforms have resulted in actual declines in output and production in the face of breakdowns in the routine processes of economic activity generally. The findings of this analysis clearly indicate, however, that there remain a number of fundamental problems of a long term nature that will inhibit and slow the realization of the potential for the forestry and forest products sector beyond the immediate short run chaos.

Timber Resources

The economic availability of timber resources, in contrast to the physical presence of forests, brings into question the real potential for near term development. Primary harvest, from designated (Category III) forests under the administration of the forest administrative authorities, has been stated as approaching 833 million cubic meters annually as a sustainable yield (Annual Allowable cut). However, only a fraction of that potential is considered by the Russian authorities as either currently available or potentially available over the next twenty years through significant investments in infrastructure for accessibility. In the present analysis, it is suggested that of the 545 million cubic meters of current and potentially accessible AAC, that the near term harvest will be restricted to the currently accessible forests. These forests have an AAC "realistic" AAC of only 426 million cubic meters, or about 51 percent of the aggregate physical total. Of the currently accessible AAC, some 248 million cubic meters are from conifer forests, and 178 million cubic meters from deciduous forests. Further, this analysis finds that some 88 million cubic meters of the "currently accessible" AAC is in fact not realistically accessible due to access, reservation for alternative uses, environmental restrictions etc.

Timber supplies from other sources include intermediate harvests (primarily from silvicultural operations), harvests from "other" forests not administered by forestry organizations, and secondary resources from waste and recycling. While important, these sources do not constitute more than 125 million cubic meters in the aggregate, and at present is mainly derived from secondary sources (primarily sawmill waste).

Economic Reforms and Forestry

The future outlook for the forestry and forest products sector is highly uncertain in today's political climate. As Russia struggles to install "market economy" mechanisms, it finds itself trapped in many economic and political issues of transition. Reforms are far from complete, particularly as it relates to the former administered cost/price system and the physical nature of decision-making for the forestry sector. Further, the overall decline in economic performance throughout the Russian economy has led to declines in almost all indicators for the sector relative to the previous "normal" levels as of 1989.

It is expected that in the near term that domestic prices and costs will continue to be distorted, and hence of limited value in guiding normal economic decision-making about the allocation of resources. Further, the

forestry sector is compelled to approach reforms from the vantage point of the existing industry structure and resource conditions. This will mean that structural adjustments will come slowly. This is only part political. The lack of capital investment to modernize and restructure the sector will be a major constraint. The reinvestment of present hard currency earnings within the sector for restructuring are meager, as these earnings are diverted to other purposes. Foreign investment is likewise discouraged by the economic and political uncertainties, as well as the unknown parameters of future policies.

It can be expected that the imperfect corrections to the price/cost structure will have an immediate impact on the forestry sector, since the freedom from central control also means that enterprises must become "profitable" - measured by the covering of primary operating costs (variable costs) from their own sources of income. In the short term, the installed industrial capacity (including logging) can be further depreciated, with the appearance of avoiding the significant capital (fixed) costs of operations. Although beyond the period of analysis incorporated in this analysis, the deferral of capital investment will have serious consequences for the sector after the turn of the century. It is also clear that Russia will be torn between two conflicting policies with respect to domestic use of available forest resources. On the one hand, the large standing inventories of timber represent a "bank account" that can be liquidated as needed to generate desperately needed hard currency. The potential for exploiting the significantly higher valued export markets is a great temptation under the pressing needs of the country at present. However, this factor is offset by the rapidly declining levels of domestic consumption since 1990, and the potentially growing need for forest products to aid in the eventual economic recovery process and future economic development. This means restricting the export of timber in lieu of meeting current and anticipated future domestic requirements.

Future Timber Harvests

In terms of harvest, the need to recover variable costs by forest enterprises means that not all "currently accessible" timber can be economically harvested under prevailing (and distorted) prices and costs. The relatively low domestic price for timber means that the ability to cover rising domestic costs is difficult, imposing a constraint on harvest.

The scenarios developed in this analysis attempt to mirror the "most likely" conditions through the end of the century, and bracket the most significant potential uncertainties. For the baseline conditions, the economic harvest rate declines to a delivered volume of industrial timber of approximately 250 million cubic meters for Period 1 (1990-1995), in contrast to a 1989 level of some 338 million cubic meters. Due to the presence of existing infrastructure for accessing the forest and the installed production capacity, the share of delivered timber increases for the European-west Siberian region, from 68 percent of the 1989 total to over 76 percent of the projected Period One timber supply. In Period 2 (1996-2000), the delivered supply is projected to decline further, to approximately 244 million cubic meters, with 178 million cubic meters (73 percent) derived from the European-West Siberia region. This slight decline in regional share is due to the continuing depletion of mature timber inventory in the Russian west. Under the Pessimistic scenario, the delivered supply would decline to only 214 million cubic meters, while the most Optimistic forecast for Period 2 would lead to a supply of 338 million cubic meters, just restoring the previous levels of 1989.

If firewood is excluded from the delivered commercial supply, but secondary sources (waste, chips and recycled fiber) are included, the total available wood/fiber supply projected from Period 1 is 230 million cubic meters, which includes 185 million cubic meters of roundwood. By region, this supply includes 175 million cubic meters from the European-west Siberian region (76 percent roundwood) and 56 million cubic meters from the Asian-Pacific region (86 percent roundwood). For Period 2, the total wood/fiber supply is 229 million cubic meters under the baseline scenario. With the decline in capital investment, the pessimistic outlook for Period 2 is for a supply of only 203 million cubic meters. Under the optimistic case, Period 2 supply would increase to 341 million cubic meters. The gain over the baseline case represents an increase of 112 million cubic meters, which includes 65 million cubic meters of roundwood, with 40 million cubic meters of this derived from the Asian-Pacific region as the inventories in the European-west Siberian region continue to decline. The most important gain under the Optimistic case would be for greater waste paper recovery in the European region, with the equivalent of 37 million cubic meters of waste fiber recovered.

The analysis also sought to approximate the likely supply response to long term price/cost reforms based on 1992 international levels. Although higher international prices are an incentive, the reform of domestic costs would clearly discourage production. The results were perhaps surprising, indicating that full price/cost reforms to international levels for Period 2 would result in <an economic timber/fiber supply of only 216 million cubic meters, very close to the Pessimistic case outlook. However, supply would shift slightly to the Asian-Pacific region, where the more abundant timber would offset the higher costs, while the European-west Siberian region would continue to face declining competitiveness due to aging capital structure. If sufficient investment was made in infrastructure to access the "potentially accessible" forest (a factor not assured) the overall supply would increase to 265 million cubic meters, well below the 338 million cubic meters attained in the "pre-reform" period (1989).

As an illustrative example, it was further assumed that world real prices would increase by 10 percent in response to growing global timber scarcity. This assumption, with constant (1992) world real costs, lead to an estimate of Russian supply of only 350 million cubic meters, close to the realized volume of 338 million cubic meters for 1989. Conifer supply would approximate 248 million cubic meters, with deciduous supply would be 102 million cubic meters.

Full economic reform (to global competitive levels) thus does not significantly improve the comparative advantage of Russia in the absence of increased prices, and only then with substantial capital investment. Russia will continue to struggle to recover to the harvest levels and delivered wood/fiber supply of the centrally planned system (338 million cubic meters) during this century.

Allocation of Available Timber/Fiber Supply

The allocation of the available wood/fiber supply will reflect the dual objectives of assuring an "adequate" domestic consumption consistent with overall economic performance (GOP) and internal price/cost reforms and the opposing need for critical foreign hard currency earnings. Assuring domestic consumption (relative to the declining GOP) results in a domestic use of timber of 207 million cubic meters in Period 1, leaving some 22 million cubic meters available as "surplus" for export. In Period 2, domestic consumption (baseline) is estimated as declining to 204 million cubic meters, leaving a slight increase available for export (25 million cubic meters)

Under pessimistic assumptions for Period 2, domestic consumption would absorb the entire supply of 203 million cubic meters. However, the analysis suggests that Russian central authorities would sacrifice domestic consumption in order to maintain exports at near present levels of 13 million cubic meters, resulting in a decline in domestic consumption to 190 million cubic meters.

Optimistic conditions would lead to a Period 2 domestic consumption of 256 million cubic meters, reflecting recovery of GOP. This growth, together with increased capital investment would allow for total supply to reach 341 million cubic meters, giving an export potential of almost 85 million cubic meters.

Domestic Use of Timber/Fiber

Domestic processing of wood/fiber is primarily related to conifer lumber. In 1989, output was 83 million cubic meters, with two-thirds of this in the European region. Projections for Period 1 indicate a significant decline, to approximately 54 million cubic meters of lumber, with conifer lumber accounting for 44 million (mainly non-larch species or 37 million cubic meters). Under optimistic assumptions, lumber production would increase over the baseline, but only to about 68 million cubic meters, still below the 1989 level of 83 million cubic meters.

Wood panel production in 1989 was approximately 12 million cubic meters. This is estimated to drop to only 6 million cubic meters in Period 1, and to a maximum of 7.7 million cubic meters in Period 2 under the optimistic case. Pulp and paper production was some 11.4 million metric tons in 1989, with 8.6 million metric tons produced in the European region. Baseline estimates are for a decline to 5.9 million metric tons in Period 1, with 3.5 million metric tons in the European region. For Period 2, production is estimated to range from 3.8 million metric tons (pessimistic) to 7.8 million metric tons (optimistic), with the majority being produced in European region.

Export of Roundwood and Wood Products

Export trade by Russia as typically involved the export of unprocessed logs to both the former Soviet Republics and China (soft trade), the Pacific Rim (Japan) and Europe for hard currency. While the Pacific Rim trade has been primarily higher quality sawlogs, the hard currency trade with Europe has been primarily lower grade sawlogs and pulpwood.

Export trade with the former Soviet Republics was approximately 20 million cubic meters in 1989. Due to economic declines in the Republics (as with Russia), domestic consumption has fallen and hence the need to import conifer logs. Period 1 estimates are that unprocessed exports will decline to 8 million cubic meters, reflecting the Russian desire to maintain the traditional trade relationship with these Republics that are the source of critically needed Russian imports of other goods. In Period 2, exports to the former Republics are estimated to range from 8 million cubic meters to an optimistic level of 17 million cubic meters, a level still below that of 1989.

Exports to hard currency markets in Europe and the Pacific Rim were about 16 million cubic meters in 1989. Period 1 estimates are for exports of 13 million cubic meters, with 7 million going to European markets and 6 million to the Pacific Rim. While only 30 percent of European exports are sawlog quality, it is expected that over two-thirds of Pacific Rim exports will be higher grade sawlogs.

In Period 2, hard currency exports are estimated to range from a low of 7 million cubic meters (pessimistic) to a high of 29 million cubic meters. The baseline projection for Period 2 is for exports of 13 million cubic meters, representing the Central Government concern for maintaining hard currency sales in spite of the implied shortfall for domestic consumption. European exports would range from 2 to 17 million cubic meters, while Pacific Rim exports range from 5 to 12 million cubic meters.

Exports of manufactured wood products are anticipated to remain modest in contrast to unprocessed timber exports. Lumber exports are almost entirely to Europe, with the total estimated at 4.5 million cubic meters total for Period 1 (4.1 million cubic meters to Europe), and ranging from 3.3 to 5.8 million cubic meters for Period 2. Panel exports are likewise modest, estimated at only 0.4 million cubic meters in Period 1 and ranging from 0.3 to 1.9 million cubic meters in Period 2. The majority of panel exports will be to the Former Asian Republics of the Soviet Union rather than to hard currency markets.

Future Outlook

Although Russia seeks to utilize the forestry and forest products sector to promote regional economic development and desires to encourage value added production (both for domestic consumption and exports), the current state of industry capacity and the near term problems of gaining hard currency for capital investments will continue to constrain the achievement of these objectives. If (and when) incentives emerge for the reinvestment of hard currency export earnings and/or a favorable climate for foreign investment is created, it can be expected that the more optimistic outlook described here will be more realistic. However, it remains that even the optimistic outlook barely allows Russia to reach the levels of harvest, production and trade achieved under non-economic central planning in the last half of the 1980s. Further development will require substantial capital investments beyond the levels assumed in the optimistic scenarios in order to develop a competitive sector with an international comparative advantage.

Trade of forest products with hard currency trading regions can be expected to continue at levels evident in the late 1980's and early 1990's through 1995 (subject to short term cyclic variations).

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.

Employing the Russian Forest Sector Model, the reasonable bounds for this important sector of the Russian economy have been estimated. The implications are that restructuring and reform have had significant

negative impacts to date, but that modest recovery can be anticipated during the balance of this century. However, no major expansions of the sector, or external trade, can be anticipated in the near to medium term. In fact, recovery to the pre-reform levels of the late 1989 will be a substantial challenge as Russia struggles to put reforms in place, and to substitute more market-like resource allocation decision-making for the previous noneconomic central planning approaches.

The longer-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. Longer-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.

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