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The Forest Sector in Moscow Oblast

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Foreword

With this report on the forest sector institutions in Moscow Oblast the fourth study in a series of case studies that IIASA has initiated in different regions of the Russian Federation is completed. The studies have been published in a series of IIASA Interim Reports (IR). The first study was conducted in Tomsk Oblast and was reported in Carlsson and Olsson (1998a), Carlsson and Olsson (1998b) and Carlsson, Lundgren and Olsson (1999). The second case study on the institutional framework of the forest sector in Arkhangelsk Oblast was reported in Carlsson *et al.* (1999). The third study on Khabarovsk Krai was recently published in Efremov *et al.* (1999). Reports of studies of the forest sector institutions in the Karelian Republic (Piipponen, 1999) as well as in the regions of Murmansk (Ivanova and Nygaard, 1999), Krasnoyarsk (Sokolova, 2000) and Irkutsk (Blam *et al.*, 2000) are currently being prepared. All of these eight studies deal with institutional aspects of the Russian forest sector.

The research for this as well as other case study reports has been made possible through generous financial support from the Swedish Council for Planning and Coordination of Research (FRN) and the Royal Swedish Academy of Sciences (KVA). A large number of people have provided valuable information and given useful comments on earlier drafts of the report.

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The Forest Sector in Moscow Oblast

Andris E. Kleinhof, Lars Carlsson and Mats-Olov Olsson

1. The Moscow Oblast Forest Sector in the Russian Economy

General Economic Situation

The Central economic region includes twelve subregions (*oblasti*): Moscow, Tver, Bryansk, Kostroma, Vladimir, Yaroslavl, Ivanov, Tula, Smolensk, Kaluga, Orlov, and Ryazan.

The Central region is beset with all the problems that exist in the Russian forest sector. It is, however, unique in some economic, social and ecological respects. In comparison with other regions, the Central region has a highly developed industrial and agricultural sector, as well as a well-developed transport infrastructure (see map on page 3). For example, the density of hard-surfaced roads in the region is six times higher than the average for Russia. In the past most of the industrial production was oriented towards the military. As can be seen in Table 1:1, the forest sector is relatively small in relation to such branches of the economy as Machine and machine building, Food and Chemical production.

The region has a relatively high investment activity. Its share in Russia's total capital investments is 19 percent. Foreign investments included the share is 74 percent. From the point of view of future socio-economic development a relatively high investment level in education, public health, construction and communications should be noted. The Central region's share of Russia's total investment in housing construction and communications is 28 and 24 percent respectively, while its share of Russia's total commodity turnover and new housing is 33 and 21 percent respectively.

The Central region is the most densely populated among all Russian regions. About 20.3 percent of the total Russian population lives in this region. Nearly half of the region's total population is concentrated in Moscow Oblast. The region also occupies a special position in terms of social welfare. In 1996, the per capita monthly income in the Central region was 1,132 rubles (USD 20.35). This was roughly 1.5 times higher than the Russian average (Goskomstat, 1997). Housing conditions, health care, as well as educational levels, especially in Moscow Oblast, are the highest in Russia as is the per capita income level. Thus, population change in Moscow is not negative as it is in most other parts of Russia.

Table 1:1. Output value in various industrial branches in the Central Region and Moscow Oblast (excluding Moscow City) in 1996. Percent.

Branch of Industry	Central Region	Moscow Oblast
Electric power generation	18.4	8.1
Fuel	3.9	0.2
Ferrous metals	2.3	3.4
Non-ferrous metals	1.1	2.0
Chemical	6.8	11.0
Machine and machine building	26.2	32.7
Wood, cellulose and paper	3.3	4.9
Building materials	5.9	8.3
Glass and ceramics	0.7	1.0
Light industry	5.6	6.1
Food	19.0	17.3
Flour and mixed fodder	3.6	0.7
Other branches	3.2	4.3
Total	100.0	100.0

Source: Goskomstat 1997.

Due to limited forest resources and a relatively well developed economy the share of the forest sector in the region's total industrial output and employment is only 3.2 and 4.7 percent respectively (Goskomstat, 1997). However, the contribution of the region's forests to the maintenance of a sound environment can hardly be overestimated.

The share of the Central region in Russia's forested area and growing stock is only 1.8 and 2.9 percent respectively. However, the region's share in wood product output is significant — for roundwood it is 8.4 percent, for sawnwood 15.4 percent, for particle board 31.2 percent, and for furniture 29.9 percent (Goskomstat, 1997). The only exception is the pulp and paper industry. For ecological reasons the development of the pulp and paper industry has been prohibited in the Central region. Generally in Russia the construction of modern, ecologically clean pulp and paper capacities is insignificant due to a lack of investments.

Moscow Oblast stands out among the other *oblasti* of the Central region through its industrial development. For example, the share of Moscow Oblast in the region's total industrial output is 51.3 percent. As a consequence of its relatively well developed industry and its growing transportation intensity the environmental quality in Moscow is deteriorating.

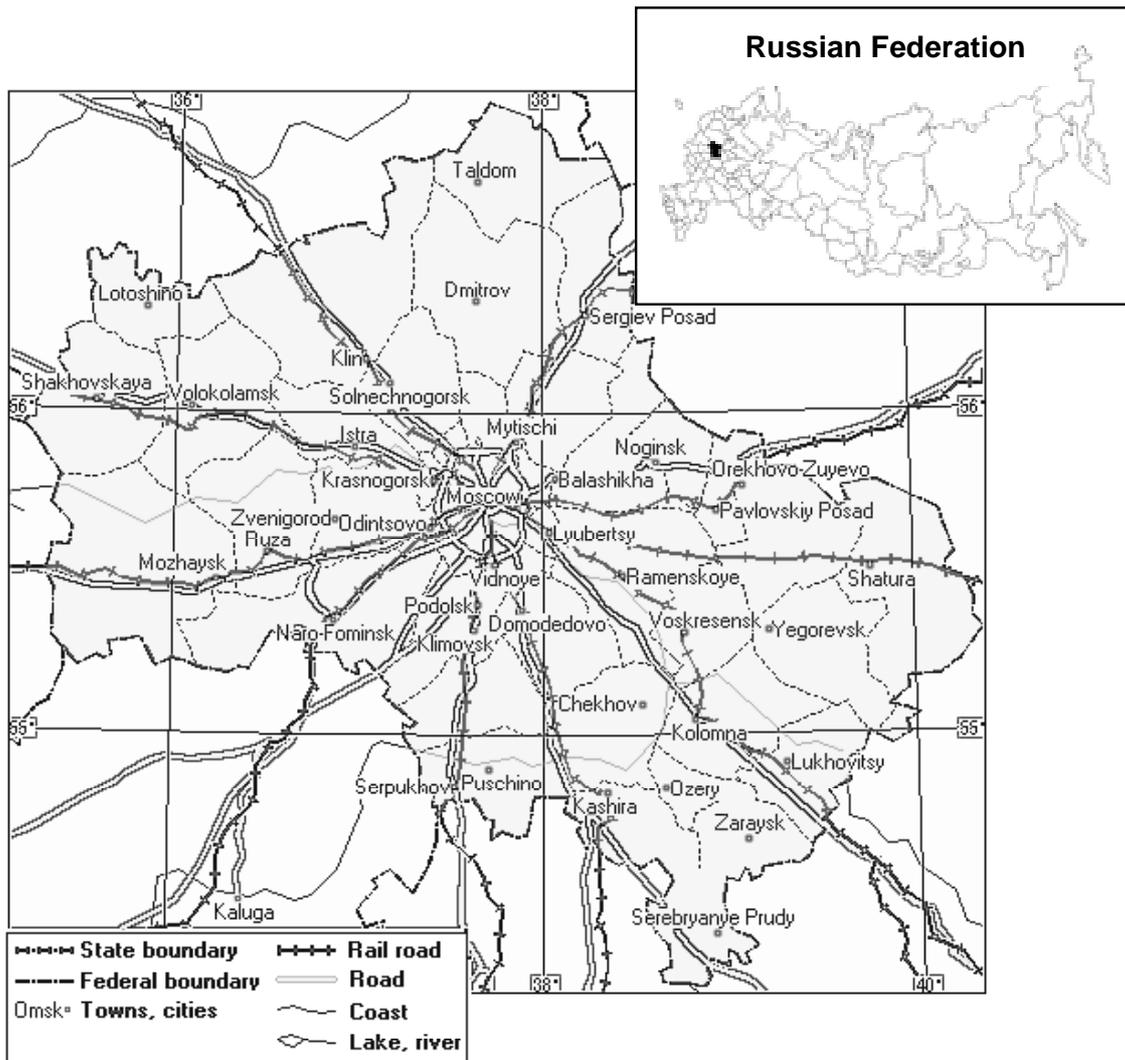


Figure 1:1. Transportation network in Moscow Oblast.

Forestry and the Forest Industry

The pressure from outdoor recreation activities on the forests of Moscow Oblast is roughly 20–30 times higher compared to the average for Russia. All forests in Moscow Oblast belong to the so-called “Group I, i.e., forests set aside for non-industrial use¹. Half of them are completely protected. These are, for example, forest parks and water conservation zones for the water supply of the city of Moscow. With a mean annual increment of 6 million m³, only 546 thousand m³ mature timber is harvested annually. Consequently, the forests are growing older while their increment and ecological stability are declining (Chuenkov and Kleinhof, 1998).

¹ Basically, Group I forests consist of lands that are set aside for non-industrial use, such as specially protected forests, municipal forests, parks, etc. The second group, Group II, consists of lands in densely populated areas with scarce forest resources in which forests must be specially protected. Group III, finally, consists of forests with a significant industrial potential.

According to the Forest Code² of the Russian Federation (Article 55) certain types of forests may be protected, with only restricted forest use. On such specially protected forest sites final felling operations are prohibited. About 60 percent of the Forest Fund of Moscow Oblast belong to this protected category. Due to the economic crisis actual clear-cuts on the remaining part of the Forest Fund fell from 1.5 million to 546 thousand m³ between 1988 and 1997. In 1997, the actual cut of coniferous and non-coniferous wood was 62 and 15 percent of allowable cut, respectively.

According to the fundamental requirements of the Russian forest policy (Article 54 of the Forest Code) the use of Russian forests shall ensure a continuous, non-exhaustive, and efficient use of forests to meet the needs of the economy and the population. Further, the management should ensure “control and improvement of environment-generating, water protecting, sanitary, recreational, and other useful capacities of forests in the interests of public health protection”. This is supposed to be done in harmony with a general improvement of the forests, via providing appropriate conditions for forest reproduction, improvement of the species composition, biodiversity and so on (Article 54). However, due to various economic and technological factors as well as to inconsistencies in the legislation itself, in practice the dynamics of forest resources in Moscow Oblast do not meet the requirements listed above. It seems that tree mortality is tripled every ten years. In 1997, loss of growing stock due to mortality totaled 15 million m³ (4.5% of growing stock). During the last 30 years the average age of forest stands has increased from 31 to 58 years, and the growing stock of mature and overmature stands has tripled (Chuenkov and Kleinhof, 1998). Deciduous softwood stands, mostly birch and aspen, account for slightly more than 50 percent of the forested area. A significant part of these stands (29% of the growing stock) consists of mature and overmature forests (FFS, 1995).

Due to inefficient harvesting practices only about 8 percent of unstocked forest lands can be reforested by high-value species through natural regeneration. Therefore, reforestation through planting dominates in Moscow Oblast, which differs from the situation in, e.g., Tomsk and Arkhangelsk (Carlsson and Olsson, 1998b; Carlsson, Lundgren and Olsson, 1999; Carlsson *et al.*, 1999). However, because of the lack of funding and damage caused by wildlife, the efficiency of reforestation is low. It can be noted that in 1997 actual expenditure for planting and thinning was only 12 and 35 percent respectively of the budgeted expenditure. The low level of forest resource utilization in the Central region has become a serious economic and environmental problem. Due to growing areas of both overmature hardwood and softwood (aspen and birch) stands the forests of the region can no longer perform its ecological function. In some cases their impact on the environment is negative. This is the case with, for instance, the CO₂ balance, as well as some important indices characterizing air and water quality, etc. Many political and economic factors have contributed to this situation (Chuenkov and Kleinhof, 1998).

As a consequence of the forest policy previously pursued in the Soviet Union there are no pulp and paper industries in the Central region, only some relatively small paper factories which use wood pulp supplied by other regions. The total volume of the paper production in Moscow Oblast amounts to 14,800 tons or 0.5 percent of total Russian production. Consequently, as has been indicated above, the entire demand for pulp and

² See Forest Code (1997) for an English version of the text.

96 percent of paper demand is satisfied by deliveries from other regions. At the same time, the capacity of sawmills is used only to 32 percent, the capacity of plywood factories to 57 percent, of fiberboard enterprises to 20 percent. As a consequence, the share of domestic production in the total consumption of sawnwood, plywood and fiberboard is only 46, 15 and 2 percent respectively (Minekon, 1996). The volume of timber harvesting, and the production of sawnwood, plywood, pulp, paper and other forest industry products in Moscow Oblast has drastically decreased since 1988 (Table 1:2).

Table 1:2. Wood production in Moscow Oblast, 1988 and 1996.

Wood products	1988	1995	1997
Roundwood (from final cuttings), 1,000 m ³	1607	840	410
Sawnwood, 1,000 m ³	1173	640	350
Plywood, 1,000 m ³	22	12	17
Particle board, 1,000 m ³	730	417	389
Fiberboard, 1,000 m ²	2	0.4	0.0
Paper, 1,000 mt	27	14.8	18.0
Paperboard, 1,000 mt	176	27.1	27.0

Source: Minekon, 1996 and 1998.

Due to a number of factors, the Central region might get a leading role in the development of future markets for timber products. The available resource potential may be demonstrated by the following numbers: the mean annual increment of the region's forests amounts to 90 million m³, which is almost equal to the allowable cut for sustainable use of mature forests. Moreover, about half of this volume will be available for future harvesting through intermediate cuttings (Moiseev and Burdin, 1997). At present, however, only about one third of the total timber resources (the annual allowable cut) in the region is harvested while most of the timber and timber products is supplied by other regions of Russia, or even imported.

In fact, the last five years have been characterized by growing imports of furniture as well as sawnwood and other timber products. For example, about 90 percent of the total paper consumption is supplied from other regions or imported. At the same time, regional capacities for the production of several forest products are only used to about 40–50 percent (Table 1:3).

Due to the high tax burden, obsolete equipment and for various economic and technological reasons nearly half (45%) of the region's forest sector enterprises are unprofitable. However, for Russia at large the corresponding number is much higher, 71 percent (Minekon, 1998). Profitability differs substantially between various forest sector branches. Most of the furniture and particle board enterprises are regarded as profitable, while nearly all logging enterprises incur losses. The unprofitability of logging enterprises is largely caused by the existing hard environmental constraints on final felling as well as by the obsolete harvesting equipment.

Table 1.3. Production, trade, and consumption of wood products in Moscow Oblast, 1995.

Wood products	Production	Import*	Export*	Consumption
Roundwood, 1,000 m ³	840	1037	37	1840
Sawnwood, 1,000 m ³	640	827	4.3	1462.7
Plywood, 1,000 m ³	12	71.8	4.1	79.7
Particle board, 1,000 m ³	417	139	112	444
Fiberboard, 1,000 m ³	0.4	21.8	0	22.2
Wood pulp mt	0	48.4	0	48.4
Paper, 1,000 mt	14.8	357	9.1	362.7

* Import numbers include deliveries from other regions as well as from abroad. Export numbers include deliveries to other regions including export abroad.

Source: Goskomstat (1997).

The total volume of forest sector output in Moscow Oblast is relatively small. In 1997, its share in the total regional industrial production was 1.2 percent (Goskomstat, Moscow). However, in several districts and villages of Moscow Oblast the forest sector plays a significant role for the local social and economic development and the non-market outputs of the forest sector can not be measured in monetary terms. However, it is well known that the quality of life of Moscow citizens strongly depends upon the forests, and, ultimately, on their use and reproduction in accordance with basic silvicultural and ecological principles.

2. Organization and Enterprise Structure

Through the Federal Forest Service (FFS) and the State Committee for Environmental Protection (*Goskompriroda*) of the Russian Federal Government the state has a direct control of forest management and nature conservation. The FFS and *Goskompriroda* coordinate their activities concerning environmental protection and the use of natural resources and conservation. For example, together they formulate the normative and methodological basis for environmental protection and forest resource utilization, thereby ensuring a unified scientific and technological policy for environmental protection and forest resource utilization (World Bank, 1997).

Responsibility for game and wildlife management, agro-forestry, and shelterbelts is with the Ministry of Agriculture and Food. The Russian Academy of Sciences and several specialized institutions of the State Committee for Science and Technologies and of the Ministry of Education complement the capabilities of the institutes, laboratories, and colleges of the Federal Forest Service and the State Committee for Environmental Protection in fundamental and applied forest research, education, training and human resource development. (World Bank, 1997:145).

Forest management units (*leskhozy*) are the local organizations of the FFS but, at the same time, they perform some functions similar to those of forest enterprises. There are

25 such units in the Oblast. They grow and maintain forests and they also sell some timber from intermediate and sanitary cuttings.

There are 159 forest industry enterprises in Moscow Oblast. Among these there are 32 logging enterprises (*lespromkhoz*), 23 sawmills, 41 woodworking factories and carpentries, 28 furniture plants, 41 convenience goods factories, and 3 papermills. All of these are joint stock companies. Since 1991, about 28 new, mainly small- and medium-sized furniture and woodworking enterprises have been established, according to official statistics. Until 1996, no law existed requiring registration of private ownership. It is, therefore, difficult to give a precise estimate of the number of new enterprises.

As a rule, the central administrations of most federal forest organizations are located in Moscow Oblast. The most important of these organizations are: The Forest Air Protection Association, the Forest inventory and planning enterprises (*lesoustroistvo*), various forest research institutes, such as the All-Russian Research and Information Center of Forest Resources, the Machinery Test Station, the Institute of Advanced Forestry Management Training, the Zonal Seed Test Station, the Russian Forest Project Institute (*Rosgiproles*), and Forestry Technical Schools. Some of these organizations have regional offices in Moscow Oblast. The regional forest inventory and planning enterprises (*lesoustroistvo*) conduct the entire forest inventory, determine the level of the annual allowable cut (AAC), and prepare management plans for all forest districts in Moscow and for some other Russian regions. Each forest management plan covers a specific forest district (*leskhoz*) or forest range (*lesnichestvo*). All forest management plans must be approved by the Federal Forest Service.

The formal institutional framework within which the forest industry operates has been undergoing a continuous change. In 1993, the Russian Forest Industry Company (*Roslesprom*) was established.³ Later, through a Presidential decree, it was reorganized and converted into a state company. However, *Roslesprom* was not successful as a state managerial body in the transition from a centrally planned system to a market economy. It basically seems to have remained a commercial organization and was unable to perform many functions assigned to it.

In June 1996, the State Committee for Forest, Pulp and Paper, and Woodworking industries (*Goskomlesprom*) was established. The purpose was to improve the management of the forest industrial sector at the federal level. However, in 1997, *Goskomlesprom* was reorganized as a forest sector department inside the Ministry of the Economy. The main objective of this department is to promote the efficient operation of the forest industrial sector by establishing a unified forest sector policy. It should also work to resolve organizational, economic and financial problems affecting the forest enterprises, to establish programs for a structural reform of the forest sector, to increase the efficiency of the sector, and to manage the state's shares of holding companies and joint stock companies. Thus, the Ministry of the Economy deals with the forest sector as a whole. In order to implement its functions, the Forest Sector Department has specialists (or groups of specialists) at the regional (*krai, oblast'*) and municipal level. However, this ministry has no sector-wide executive authority, giving rise to a fundamental gap between top-level political decision-making and sectoral line management, a

³ See Burdin (1997) and Lehbruch (1998) for an account of the Moscow based forest organizations.

gap that leaves many key issues unattended or unresolved. (An illustration of the institutional embedding of an actor in the regional forest sector is given in Figure 1:1.)

Following the nearly all-embracing privatization of the logging, woodworking, and pulp and paper enterprises, several commercial organizations were established to replace the former management system of the forest sector. It should be noted that the process of forming the new institutional arrangement in Russia is very complicated and contradictory. Practically all furniture, woodworking and plywood enterprises as well as 99 percent of pulp and paper firms have been privatized. However, the prevailing part of them remain in mixed (state and private) ownership. Actual ownership rights have not yet been clearly defined. The incomplete legislative basis and the large share of mixed private-state enterprises provide a fertile soil for corruption. Enterprises maneuver to receive preferential credits and state subsidies, which are not economically justified. As a result of privatization, the major part of the nation's wealth has become the private property of a small group of people, popularly called the *oligarchs*, who exert a growing impact on government policies.

An example of the misuse of rights on the part of federal executive bodies was the activities of the Russian industrial company *Roslesprom*. The activities of *Roslesprom* has drawn a great deal of attention from the Russian mass media, such as the monthly magazines *Lesnaia nov'* (Forest News) and *Lesnoi eksport* (Forest exports), as well as the newspapers *Rossiiskaia gazeta*, *Kommersant DAILI*, and others. According to expert opinion *Roslesprom* had monopoly power over the process of privatization of forest industry enterprises, as well as over export quotas, and licenses. Moreover, it had control over the distribution of state subsidies and preferential credits (A. Velitshenkov, *Rossiiskaia gazeta*, 5 April 1996). Many of *Roslesprom*'s administration staff have had leading positions in private holding companies and other commercial corporations (Klevtsov, 1996). According to the Principles of State Service, employees in state organizations do not have the right to participate in commercial activities. However, one should note that the major part of privatized enterprises are in a mixed state and private ownership.

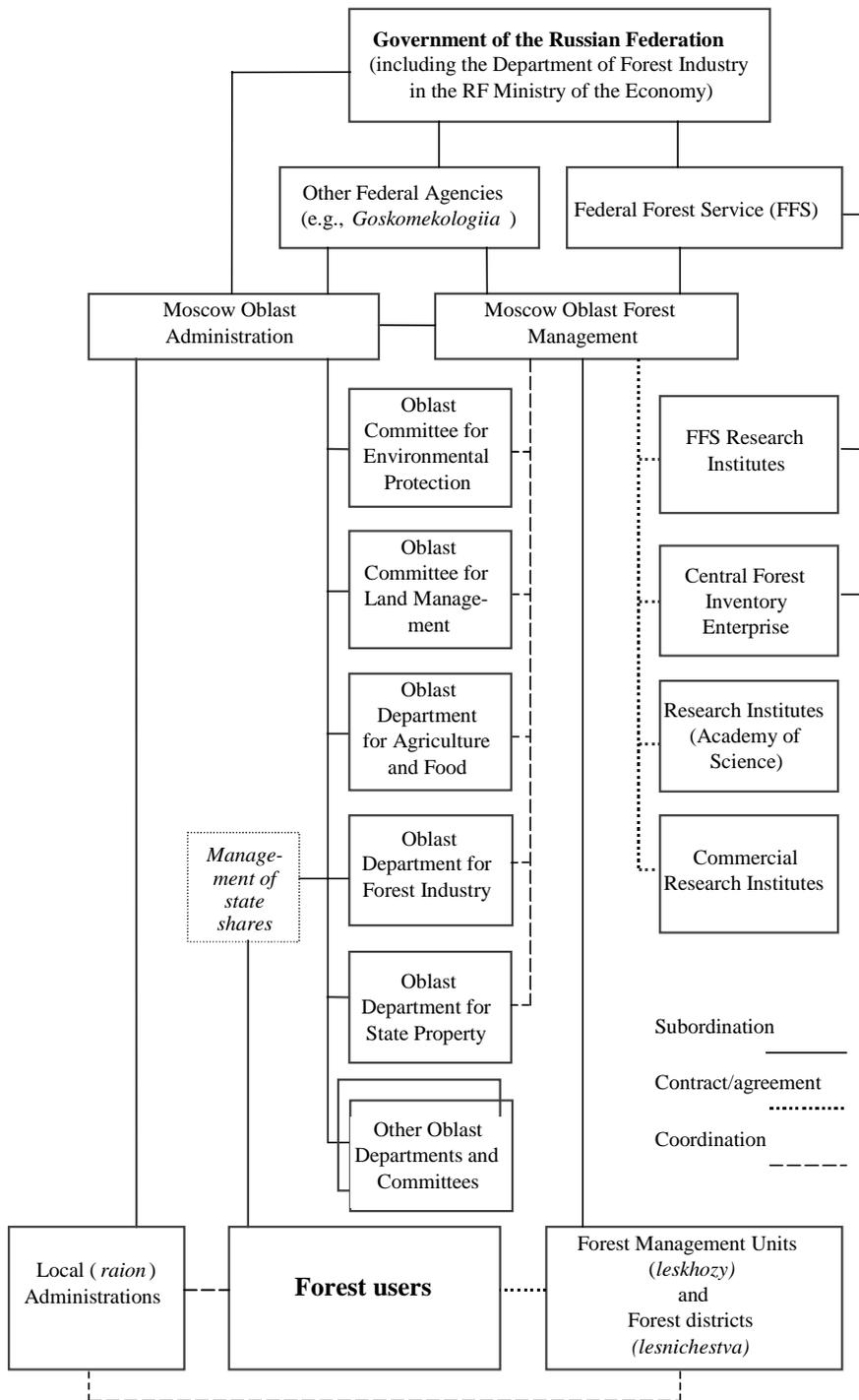


Figure 1:1. The institutional framework of forest management in Moscow Oblast.

At the same time, the law of bankruptcy does not work and, due to what has been said above, the economic reform in Russia has not led to a rise in efficiency among forest sector enterprises. On the contrary, the share of unprofitable forest enterprises has risen from 29 percent in 1994 to 45 percent in 1997 (Minekon, 1998). In order to coordinate the activities of the forest sector various holding companies, financial and production

groups (so-called FIGs) are being established, combining forest industry enterprises, commercial banks, investment funds and other financial organizations. However, these organizations have brought limited support to the development of a private forest sector mainly because of the commercial interests of its administrative staff. Currently, they do not play any significant role in the elaboration of forest industrial development policies, nor for solving the actual technical and socio-economic problems of the forest enterprises.

Forest Sector Organizations in Moscow Oblast⁴

There are a number of other organizations in Moscow Oblast of relevance for the forest sector. These organizations can be divided into four categories:

1. governmental institutions;
2. commercial organizations;
3. research and education establishments; and
4. public organizations (NGOs).

1. Governmental Institutions

Among the most important governmental institutions related to the forest sector we find the State Committee for Environmental Protection (*Goskompriroda*). The Committee has regional and district committees and sections. The principal functions of the regional Committees are (World Bank, 1997:152-4):

- To manage environmental protection and to ensure a unified scientific and technical policy for environmental protection and resource utilization.
- To coordinate ministries, departments, enterprises, institutions, and organizations in the sphere of environmental protection and natural resources.
- To formulate the normative and methodological basis for environmental protection, resource utilization regulation, and ecological security.
- To establish a unified system of ecological monitoring.
- To organize and conduct state environmental impact assessments.
- To organize and implement state control in environmental protection and natural resource utilization and to ensure compliance with environmental safety norms.
- To provide appropriate environmental information to the public.
- To organize and manage the *zapovedniki* and the Red Book of the Russian Federation.
- To meet Russia's obligations to international organizations, participate in international agreements, and collaborate with international organizations in natural resource protection and environmental management.

⁴ See also Appendix 1.

- To develop and effectively utilize the material and technical support of the regional committees and other organizations subordinate to the former Ministry of Environmental Protection and Natural Resources.

2. Commercial Organizations

Other organizations related to the forest industry are:

- JSC “Exportles”.
- JSC “Lesexport”.
- JSC “Rosbumopttorg”.
- JSC “Kontsern Bumaga”.
- Foreign economic organization “Vneshles”.
- Open joint stock company “Lestorgurs”.
- JSC Trading house “Les”.
- JSC Trading house “Bumaga”.
- Open joint stock company “Lesfintorg”.
- Joint international exchange.
- Union of forest exporters of Russia (*Soiuz lesоекспортеров*).

All the above mentioned companies and associations are located in Moscow. Among the other commercial organizations related to the forest sector, the following should be mentioned: *Lesmash, Mebeldrev, Lesbank, Roslesinterbank, Russian Forest Exchange, Garant-Promles*.

3. Research and Educational Establishments

There are also seven research and project institutes and an Institute for Advanced Training of Forest Industry Specialists located in Moscow Oblast:

- Joint stock company NIPIEI lesprom;
- Central Research Institute for Mechanization of Logging Operations (TSNIME);
- Central Planning Institute for the Forest Industry (*Rosgiprolesprom*);
- Central Planning Institute for Forestry (*Rosgiproles*);
- All-Russian Institute for Advanced Training of Forest Industry Managers and Specialists (VIPKLH);
- All-Russian Research Institute for Silviculture and Forestry Mechanization (VNIILM); and
- All-Russian Research and Information Center of Forest Resources (ARICFR).

Forest research institutes and high schools outside the Federal Forest Service and the Forest sector department of the Ministry of Economy located in Moscow Oblast include:

- The International Forest Institute;
- The Institute of Forest Research of the Russian Academy of Sciences;
- The All-Russia Institute of Medicinal Plants;
- The Timiryazev Agricultural Academy;
- The Moscow State Forest University; and
- The Department for Forestry and Melioration of the Russian Agricultural Academy of Science.

4. Public Organizations (NGOs)

Among the public organizations related to the forest sector the most active are regional (*oblast*) and local Greenpeace branch organizations. But, also a number of other environmental groups operate in the oblast. During the last two years, regional Greenpeace organizations have achieved changes in several government decisions related to the conversion of forest lands (specially protected forest sites) to non-forest lands.

Moscow hosts the headquarters of the Russian representation of the World Wildlife Fund (WWF), as well as the Forest Stewardship Council. Both organizations have regional offices, Moscow oblast included. Their activities are related to the development of independent certification and sustainable management of forests. There are also some other international and Russian ecological public organizations which are related to the forest sector, such as the International Academy of Nature and Society, and the Russian ecological movement “Kedr”.

3. Federal and Regional Forest Legislation — Benefits and Shortcomings

The text of the new *Forest Code* of 1997 differs substantially from that of the 1993 *Principles of Forest Legislation* (Ekosinform, 1993). It contains a number of new concepts and definitions, as well as essentially revised standards and regulations governing the utilization, protection, conservation, and regeneration of forests. According to the Federal Forest Service, the main objectives of the new Forest Code are to strengthen the state system of forest administration and management and to provide a comprehensive legal framework for sustainable utilization of forest resources under market conditions. The new Forest Code more carefully specifies the sphere of application of the forest legislation in the Russian Federation (World Bank, 1997; Pappila, 1999). Pursuant to the Code, all relations involving utilization, protection, conservation, and regeneration of forests shall be governed exclusively by the forest legislation (Article 5).

The Forest Code has changed the division of responsibilities among different levels of government for the utilization, conservation, protection and regeneration of forests belonging to the State Forest Fund. In accordance with the 1993 *Principles of Forest Legislation* (Ekosinform, 1993), the payment rates for forest resource use were fixed by municipal administrations (administrative districts and towns) where forests grow.

Along with it, the law leaves regions the right to change the above order of estimating concrete rates for stumpage payments, in case this need should arise. Under the 1993 *Principles*, payments were to be made to district budgets and at the discretion of the bodies of local self government, which were not responsible for forest resource reproduction, a part of the proceeds could be earmarked for protecting and conserving forests.

The [new] Code establishes a totally *new mechanism of financing* the costs of administration and management, which the Federal Forest Service believes to be fundamentally sustainable. Forest fees shall be determined for each leased forest tract and for each type of forest use at forest auctions. These fees shall be no less than the *minimum stumpage rates* determined by the Federal Government. (World Bank, 1997:174).

Forty percent of the applicable minimum rate shall go directly to the Federal budget, and sixty percent shall go to the regional budget where these funds shall be earmarked for forest regeneration. However, this only applies to regions with abundant forests, where the established annual allowable cut for commercial logging is over one million cubic meters. All other regions receive 100 percent of the minimum rate of the forest fees. Forest fees and lease payments in excess of the federally established minimum stumpage rates shall go directly to the *leskhozy*. These are tax-exempted as budgetary funds and shall be used solely for forest management purposes (Article 106).

The proposed new system of payments for forest use and financing of forest management provides a better balance of the interests of the federal and subnational governments in the protection, use and regeneration of forest resources.

In a significant departure from the 1993 Principles, the draft Forest Code of July 1996 substantially reduces the influence of environmental protection agencies in decision-making on forest management. (World Bank, 1997:174).

...

The [...] Forest Code introduces mandatory *certification* of timber stands and subsidiary forest resources. Certification responsibility is vested in the Federal Forest Service. (World Bank, 1997:175).

Although the new Forest Code can be considered as a qualitatively new stage of forest legislation development in Russia, in some important respects it is not in line with current international social, economic and environmental thinking. Here we will consider only its most important inconsistencies and shortcomings (see also, Pappila, 1999).

First of all, the new Forest Code does not provide the necessary preconditions for the implementation of forest ownership rights. Fundamental issues concerning land and forest ownership and the consequent management responsibilities are unlikely to be adequately addressed until appropriate land legislation is in place. The Forest Code should nevertheless be future-oriented. The Constitution provides for the possibility of various forms of ownership (private, state, municipal and other) related to natural resources like land and forests. Moreover, some so-called subjects of the Federation have already declared private ownership of land. Contrary to these provisions, the Forest Code proposes that all State Forest Fund forests be under federal ownership (Article 19). The Forest Code states that ownership transfers of only a part of the Forest Fund to the Subjects of the Russian Federation is allowed (Article 19).

Such a position is in contradiction with the legislation of a number of regions in Russia. Moreover, there is an imbalance between the rights and responsibilities of the Federation and those of the Subjects of the Federation. Even though, in accordance with the Forest Code, all State Forest Fund forests are under Federal ownership, the Subjects of the Federation are responsible for the financing of expenses on forest reproduction (Article 108). The authority of the Subjects of the Russian Federation even includes such an important ownership right as converting forest lands in second and third group forests into non-forest lands for purposes unrelated to forest management and the use of the Forest Fund.

The Forest Code does not provide economic prerequisites for the management goals that is associated with state forest ownership rights. In accordance with the Forest Code (Article 54), forest management should include a multi-purpose, continuous non-exhaustive use of the Forest Fund to meet the needs of the population for timber and other forest resources; reproduction, improvement of the species composition and quality of forests, enhancement of forest productivity, as well as conservation and protection of forests. However, there are no legal guarantees even for the financing of forest resource reproduction.

The Forest Code declares sustainable development of forest ecosystems and their use to be a fundamental requirement for forest management, but it does not provide the necessary legal prerequisites for its implementation.

We might agree that the implementation of the Forest Code will contribute to the development of market relations in the forest sector (Forest Service, 1998). However, the implementation of the Forest Code has already met great difficulties. The state administration of forests and forest reproduction is not financed via the Federal budget or the budget of the Subjects of the Russian Federation. Instead, the main part of the funding comes from incomes generated via *leskhoz*'s "own assets", including incomes from intermediate cuttings. Under such circumstances, *leskhoz* are forced to engage in commercial activities quite in contradiction to the forest legislation.

Hence, the Forest Code is not future oriented. It has a regulatory character, but does not provide any incentives for increasing the efficiency of forest resource use and reproduction. The Parliaments of some Subjects of the Russian Federation, such as Karelia and Khabarovsk, have adopted Regional Forest Codes. In Moscow Oblast a draft of a Regional Forest Code has been elaborated, but it has not yet been adopted by the Oblast Duma.

Forest Sector Regulations Causing Problems for the Region

The economic crisis with a decreased demand for wood products has led to a reduction of financial resources to be used for forestry. During periods when harvesting is below the annual allowable cut forestry activities might be limited to fire control, sanitary activities and reforestation. However, the Federal Forest Service and its regional and local organizations do not even command funding for performing such a limited number of forest reproduction activities. In 1997, in order to solve the problem of financing forestry activities the Federal Forest Service partly revised the methodology for calculating so-called minimum stumpage prices. The new prices were accepted by the Federal Government at the end of 1997. In contrast to the previous approach, the

minimum level of stumpage prices is determined by the expenses on forest resource reproduction. Nevertheless, the implementation of the new method for calculating minimum stumpage prices has met resistance from forest industry representatives.

The Forest Code allows selling stumpage at free prices through auctions. As the practice of such auction sales has shown, stumpage prices in this case rise several times, compared to the prices set by the government. However, resource sales through auctions have not received wide recognition. In many cases, the efforts of forest agencies to arrange stumpage sales through auctions have failed because nobody wanted to trade. Real competition only exists for high quality stumpage located close to roads. In Moscow Oblast lease agreements have received only limited recognition. The volume of final cuttings performed on the basis of lease agreements in 1998 was only 61,000 m³ or 3.5 percent of the volume of allowable cut. The major part of final felling was carried out on the basis of short term agreements.

Wood Production

The dominant part (65%) of the allowable cut consists of deciduous softwood (birch and aspen). Due to the lack of capacity for the production of pulp, paper and paperboard the demand for birch and aspen roundwood in the regional market is very low. There are unused softwood resources but their exploitation is limited by ecological constraints. Attempts to solve the problem of landscape-based multi-resource management early led to the classification of forests into groups and categories, which were fixed in a government resolution from 1943 (cf. footnote 1 above). The more recent forest laws, including the 1997 Forest Code, set even more rigid constraints on the exploitation of forests belonging to the first group. As has been indicated, in Moscow Oblast all forests have been referred to the first group, half of them are purely protective, i.e., forest parks and water conservation zones for the water sources supplying the city of Moscow. But due to the old management regime, the relatively high logging costs and the lack of environmentally acceptable logging machinery, these forests are very little used.

The Moscow regional market for wood products (sawnwood, plywood, paper, paperboard, furniture, etc.) is highly competitive in comparison with other regions. Furniture, wallpaper and some other forest industry product market segments have been monopolized by importers. Forest logging companies located in neighboring forest regions (North, North-west) have competitive advantages over the Moscow based forest raw material suppliers. First of all, in the North and the North-West regions as well as in other regions, regional governments support the loggers financially, providing them with credits. Since logging is the only way to employ the local population in most of these regions, the problem of preserving logging companies is a political and social rather than an economic problem (cf. Carlsson and Olsson, 1998; Carlsson *et al.*, 1999; Piipponen, 1999). This assistance leads to a chain of consequences. First, there is a surplus wood supply leading to decreasing wood prices. Secondly, large pulp and paper mills and woodworking enterprises are the only major wood consumers in the forest regions. In their strive to get hold of the major portion of the resource these regional “monopsonistic” buyers are in a position to squeeze roundwood prices to even lower levels.

In Moscow Oblast the government does not, with some exceptions, support logging enterprises. Besides, there are no large monopsonistic pulp and paper mills. Only five of the sawmills use more than 20,000 m³ of roundwood per year. As a result, the harvesting costs and roundwood prices in Moscow Oblast are significantly higher (15–20%) than in the North and some other regions with substantial forest exploitation.

Taking all the above factors together have lead to a reduction in roundwood supply from local resources despite a relatively high per-capita consumption of sawnwood, plywood, paper, paperboard and other wood products in the Moscow region. Consequently, such products are mostly imported or delivered to Moscow from other regions of Russia.

As was stated above, expenses for forest reproduction should be financed from the budgets of the regions. Expenses for the maintenance of the Federal Forest Service, its territorial agencies, measures taken to protect forests and combat forest fires and forest pests and diseases, as well as construction of forest roads should all be financed from the Federal budget. In accordance with the Forest Code (Article 106) a part of the money obtained from the collection of payments for the use of the forest fund shall be transferred to the corresponding territorial agency of the Federal Forest Service to finance expenditures for the reproduction of forests. However, even the total sum paid for the use of the forest fund cannot provide sufficient financing for its reproduction. The real amount of payments transferred to the corresponding territorial agencies of the Federal Forest Service to finance expenditures for the reproduction of forests thus mainly depends on the market situation.

In 1997, the average stumpage price per cubic meter in the Russian Federation was about USD 1.6 (in the Central region — USD 2). As a consequence, the state receives only a small part (about 15–20 percent) of the total forest rent.

It should be noted that the Forest Code does not consider financing expenses for the reproduction of non-market forest values, such as recreation, biodiversity, etc. This is a serious problem for a region such as Moscow Oblast, where all the forests belong to the first group, which is not intended for industrial use. Expenses for logging and forest reproduction in Moscow Oblast are much above the corresponding average level in the Russian Federation. Moreover, neither the Forest Code nor the economic legislation stimulate regional forest administrations to increase payments for the use of the forest fund.

Although the Forest Code permits stumpage sales through auctions, it often seems to be assumed that the stumpage is a commodity and the payment received is the commodity price. This is, however, in contradiction to the tax legislation in Russia. In accordance with the current tax legislation, the forest revenue, including payments for forest resource use, is a tax and should not be seen as the price of a commodity. This automatically implies a centralized control over the setting of forest resource payment rates, as well as an allocation mechanism for the money obtained from collecting payments for the use of the forest fund (Voronkov, 1997). This is similar to what is practiced in Canada where the government sets the stumpage fee.⁵

⁵ In Canada forest management is a matter for the regional level, however. For example in the province of Ontario, the Ontario Ministry of Natural Resources decides stumpage fees. Virtually all of this income is allocated for forest management purposes. In addition, however, “the forest industry pays a significant

4. Politics and the Forest Sector

The decentralization of the decision making process in Russia is still far from completed. Despite some progress in this direction, all necessary preconditions for resolving the problem do not yet exist. A significant part of the leading administrative personnel on both federal and regional levels are representatives of the former *nomenklatura*. They are now working in governmental organizations as well as in the private sector. It is sometimes argued that it is impossible to change, in a short time, a way of thinking that has dominated for decades. If so, this explains the fact that the decentralization process in the forest sector proceeds slowly in governmental institutions as well as in private firms and holdings. Moreover, large forest industrial joint-stock companies dominate not only the forest industry, but the forest sector as a whole. The difficulties in implementing the new version of minimum stumpage fees, which was signed by the Federal Government at the end of 1997, confirms this thesis.

The forest industry companies with the help of their representatives in the government as well as in the Duma tried to abolish the new increased stumpage fees. They motivated this action as a necessity caused by a general unprofitability among forest industry enterprises, and mainly the logging enterprises. However, as has been mentioned above, the share of stumpage of the total input costs of roundwood is insignificant. One of the main reasons for the unprofitability of forest enterprises, is the tax burden, as well as costs for the maintenance of social services. The events after August 1998 has confirmed that the most effective way to overcome the administrative command methods is to develop the market mechanisms. Due to the rising demand in roundwood and roundwood products, stumpage fees in many regions have been increased during the end of 1998 and the first half of 1999. For example, in Leningrad Oblast the stumpage prices paid at auctions increased 4–500 percent in the first half of 1999 in comparison with the corresponding period of 1998.

It is known that the representatives of the former “*nomenklatura*” have preserved a widespread personal contact network, which they even broadened during the period of “*Perestroika*”. The lack of universal ethical norms in Russian business should also be mentioned among the most important reasons for the development of informal relations between various forest sector organizations. Violations of agreements, deception, breach of obligations, corruption and other similar negative phenomena are common features in Russian business life. (How this might apply to the forest sector is further discussed in chapter 6.) Under such circumstances maintaining a “personal union” is the most reliable way of connecting various organizations which might not be formally related. Personal contacts play an important role for resolving all problems connected to the functioning of the forest sector organizations and firms, including employment.

The consequences of this behavior have been discussed by Gaddy and Ickes (1998, 1999). According to their theory of the Russian “virtual economy” firms face a trade off between investments aimed at reducing the “distance” to the market and investment in “relational” capital, characterized by barter, tax relief and other privileges. Since directors are rational they will promote relational capital investments if these are

amount annually in taxes” (Ministry of Natural Resources of the Province of Ontario, 1998:19). Thus, the stumpage fee is something separate from the concept of a tax. In Scandinavia, as a comparison, the market purely decides stumpage fees, while the government decides taxes.

significantly cheaper. Thus, it can be assumed that representatives from old, state owned companies have a higher relational capital and thus a greater incentive to opt for non-market solutions. Thus, their behavior should not necessarily be explained with reference to “old mind maps” but as a rational adjustment to a given institutional framework.

The political structure of the Moscow region is very complex. The city of Moscow is the political, financial and industrial center of the Russian Federation. The headquarters of all the powerful political parties are located in Moscow. However, it should be noted that the process of forming political parties has only just begun. The only exception is the Communist Party of the Russian Federation, which has partially preserved its former local organizations.

In terms of political preferences the population of Moscow Oblast is rather similar to the Russian average.⁶ While the Communist Party received 22.3 percent of the votes in the 1995 State Duma election the corresponding figure for Moscow Oblast was 22.16 percent. “Our home is Russia” as well as “Yabloko” received somewhat higher support in the region. However, the populist “Liberal Democratic Party” received a significantly lower support in Moscow Oblast as compared with the Russian average as well as a forest region like Arkhangelsk (cf. Table 4:1).

Table 4:1. Result of the State Duma election in 1995, percent

	Russia	Moscow Oblast	Arkhangelsk
Turnout	64.37	63.16	64.99
Communist Party	22.30	22.16	14.09
Our Home Is Russia	10.13	13.79	7.98
Liberal Democratic Party	11.18	5.2	10.84
Yabloko	6.89	10.99	7.72
Women of Russia	4.61	4.31	8.85
Communist-working Russia	4.53	3.06	2.89
Party workers' self government	3.98	3.73	8.30
Russia's choice	3.86	5.19	4.99
Congress of Russia's communities	4.31	6.84	3.08
Agrarians	3.78	0.99	2.79
Derzhava	2.57	1.29	1.71

Source: Norwegian Institute of International Affairs (NUP), Centre for Russian Studies Database at URL: http://www.nupi.no/russsland/elections/StDum95_1.htm (4 Nov. 1999).

⁶ Sources for this section (all 4 November 1999):
http://www.nupi.no/russsland/elections/Pr_El_91.html
http://www.nupi.no/russsland/elections/Pr_El_96.html
http://www.nupi.no/russsland/elections/December93_ref_1.html
http://www.nupi.no/russsland/elections/StDum95_1.htm

Another difference could be found in the 1991 referendum concerning the preservation of the Soviet Union. Around 71 percent of the voters in Russia was in favor of keeping the union while the corresponding number in Moscow Oblast was 63.83. Also, in the referendum in December 1993 concerning the new constitution, the population of Moscow Oblast gave a somewhat greater support (58.49%) for the new constitution than the Russian average (55.22%). In the 1996 presidential election, it was also demonstrated that the Oblast gave Boris Yeltsin considerably greater support (64.76%) than the rest of Russia (53.7%). To summarize, it can be concluded that the political preferences in Moscow Oblast are more similar to the Russian average and the capital Moscow than regions such as Arkhangelsk and Karelia. If support for the major communist party reflects some kind of “conservatism” among people, Moscow Oblast is as conservative as the rest of the federation.

One of the most distinctive features of the political situation in Russia, including Moscow Oblast, is the lack of real opposition to the existing executive power. The Communist Party has a majority in the Duma, but except in the existing federal government, communists have lost their former leadership. In addition, it should be noted that the Liberal Democratic Party is gradually losing its political power.

In short, the activity of the various political parties can be characterized as competition for leading positions in the executive and representative authorities. In order to achieve such a political goal the various parties do not always act in accordance with their own political programs. The political structure in Moscow is characterized by the dominance of the executive power. This situation can, at least partially, be explained by the fact that Moscow Mayor Yuri Luzhkov is one of the leading Russian politicians. At the end of 1998 he was appointed the leader of the new political movement *Otechestvo* (Fatherland), which has a social-democratic orientation.

The headquarters of the richest and most powerful Russian monopolies are situated in the city of Moscow. These monopolies exert a growing impact on the social and economic policy in Russia at the federal as well as the regional levels. As a rule, the leading branches of the Russian economy have specific “lobby” groups in the Federal and regional parliaments. So does the forest industry. The influence of this lobby group on the economic reform, especially on the privatization program, has been, and still is, significant. The activities of the lobby organizations have been given a great deal of attention from Russian mass media, such as the monthly magazines *Lesnaia nov'* (Forest news), *Lesnoi eksport* (Forest export), and the newspapers *Rossiiskaia gazeta* and *Kommersant' DAILI*. According to the media the specific “lobby” groups have monopoly power over the process of privatization of forest industrial enterprises, as well as over the distribution of state subsidies and preferential credits (cf. A. Velitshenkov, *Rossiiskaia gazeta*, 5 April, 1996).

At the same time, the influence of specific lobby groups on tax legislation, as well as the implementation of the programs of modernization and restructuring in the forest sector have been very limited. For example, up to now the existing tax legislation does not take the seasonal character of logging operations into account. The influence of specific “lobby” groups on the economic reforms in the forest sector can be discussed in many respects. However, so far, these groups have not contributed much to achieving the main objectives of the privatization program, to promote enterprise efficiency, productivity, and competition, or to attract foreign investments.

During the last five years a number of federal and regional programs for modernization and restructuring have been signed by the Federal Government. However, due to a shortage of funding and the unfavorable investment climate not a single one of these programs has been implemented.

There is neither any legislative nor economic mechanism for popular participation or the participation of public movements in the decision-making process concerning forest resource use and the manufacture of forest products. Therefore, it is difficult to talk about “democratic” decision-making in the forest sector. As an exception, the activities of the regional Greenpeace organization might be mentioned. However, the efforts of the regional Greenpeace organizations are mostly oriented towards the elimination of the shortcomings of the forest resource use and reproduction, not towards their causes. In order to solve the problems of forest legislation improvements and provide the necessary funds for multi-purpose, non-exhaustive use of the Forest Fund, joint efforts of the Federal Forest Service and Greenpeace organizations, as well as scientists are needed. In this context, the growing activity of the Russian Academy for Agriculture, the Russian Academy of Natural Sciences, as well as the Moscow State Forest University and VNIILM in the elaboration of federal and regional programs for an efficient use and reproduction of Moscow forests should be mentioned.

The impact of the regional trade union organizations on the social and economic policy of the Russian government is very limited. One cannot even speak about trade unions in the sense of western democratic countries.

How do the forest enterprises operate in such an environment and how do managers and others look upon their situation and the prospects for developing the forest sector? This is the topic of the next chapter.

5. Business Behavior

How is the current situation looked upon from the perspective of forest enterprises? What do managers and entrepreneurs regard as problems and under what circumstances do they run their firms, do they invest, do they consider rules and regulations adequate, can they acquire enough timber, and so forth? These kinds of questions form the topic of this chapter. This chapter is based on interviews with 25 forest sector enterprises in Moscow Oblast.⁷ The sample is not statistically representative, firms were selected with the aim of covering different branches of the forest sector. Thus, among the interviewed enterprises we find eleven sawmills and processing firms, three harvesting companies, one forest management enterprise, and one consultant. The rest of the firms can be characterized as performing combinations of the activities mentioned. About half of the interviewed enterprises have less than 200 employees. The three largest companies employ between 1,044 to 3,050 individuals. The average enterprise in the sample was established in the 1970s. Only a minor part of the interviewed enterprises were established after the collapse of the Soviet Union.

⁷ For information on how the interviews are performed see, Carlsson, *et al.* (1999:Appendices 1:1 and 1:2). In total, the IIASA Institutional Framework Database contains data on 245 companies, of which 25 are Swedish, the latter for comparison purposes.

Production and Productivity

It seems to be a common pattern that while production drops in the forest sector employment does not decrease accordingly (cf. Carlsson, *et al.*, 1999; Nilsson and Shvidenko, 1998). In the following two diagrams changes in employment and production in the interviewed Moscow Oblast firms are related to an estimate of productivity change (production volume in tons or cubic meters related to the number of employees in 1998 and 1993). Thus, the diagrams are aimed at indicating restructuring efforts manifested in changes in the competitive position of the Moscow forest firms during the last five-year period.

As shown in Diagram 5.1, two of the fourteen firms have been able to maintain or increase their productivity since 1993 (i.e., those above 1 on the vertical axis). One firm exposes market behavior similar to that of a typical western forest enterprise, i.e., it decreases employment and increases productivity (the latter only marginally however). From Diagram 5.1, it could also be concluded that the vast majority of the companies find themselves in a very difficult position with stagnating or decreasing productivity as well as decreasing employment. Two firms have even increased their employment despite decreasing productivity.

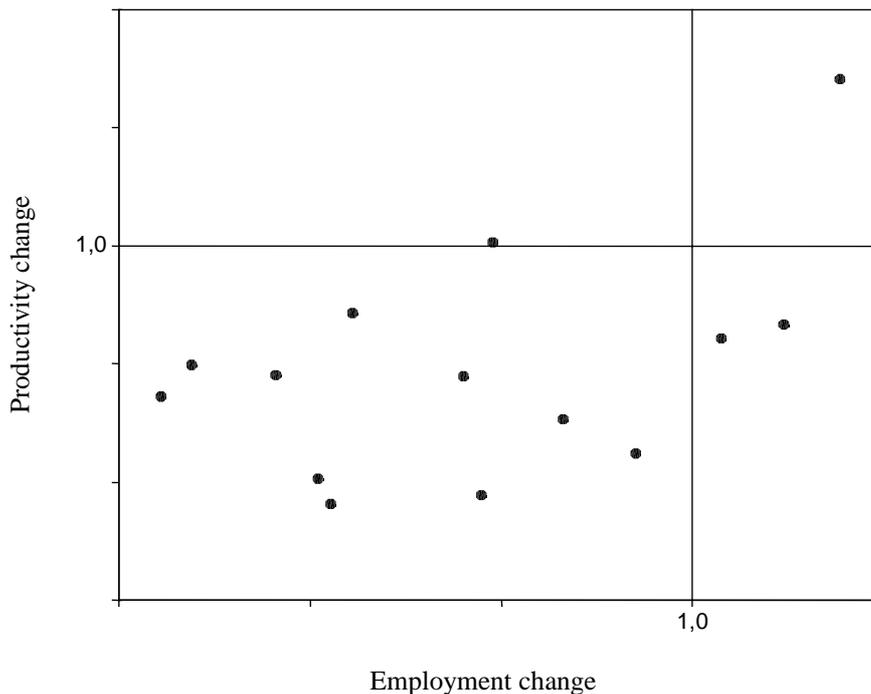


Diagram 5.1. Employment change related to productivity change in 15 forest enterprises in Moscow Oblast 1993–1998.

In Diagram 5.2, productivity changes are related to the changes in production volumes among 14 companies. Productivity decreases are obviously heavily dependent upon the large reductions in production that have taken place during recent years in most Moscow Oblast forest firms. The simple linear regression applied fits well to observed changes (R_{sq} 0.71) among the firms with decreasing production (i.e., those below 1.0

on the horizontal axis in Diagram 5:2). The possibilities to reduce employment at the same rate as production decreases seem to have been limited in most companies. As shown in the diagram, only one of the firms has been able to maintain productivity along with a decreasing production volume. Only one company in our data set seems to have started a restructuring and transition process in a market oriented direction. If this observation is valid for the majority of the forest firms in Moscow Oblast we can fear that the forest sector decline is even more severe than the analysis in previous chapters has indicated.

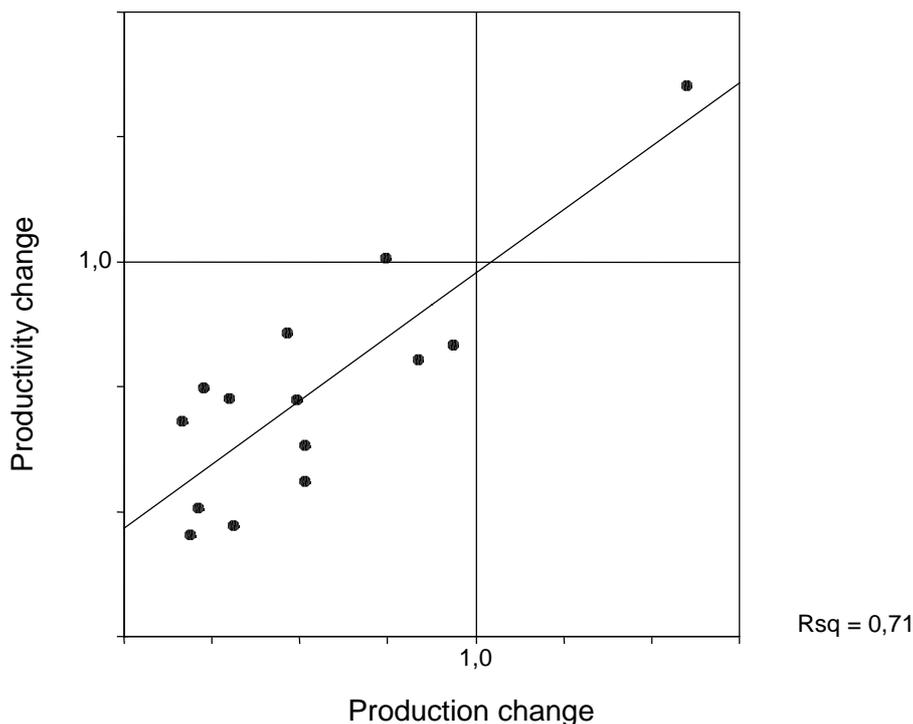


Diagram 5:2. Production change related to productivity change in 14 forest enterprises in Moscow Oblast 1993–1998.

Investments and Timber Supply

In terms of investments the situation in Moscow Oblast mirrors the situation in other Russian regions.⁸ Almost 80 percent of the enterprises do not make any investments at all in their firms. Given that a general restructuring of the forest sector requires renewal of technology as well as of current methods of production it is striking that the level of investment is so low. In fact, as Table 5:3 indicates, the level is slightly lower among the Moscow Oblast firms than among enterprises in other Russian regions. If one compares with the Swedish firms in our sample the difference is striking.

⁸ Cf. other cases studies conducted within the IIASA Sustainable Boreal Forest Program: Carlsson and Olsson (1998); Carlsson, Lundgren and Olsson (1999); Carlsson, *et al.* (1999); Ivanova and Nygaard (1999); Jacobsen (1999); Piipponen (1999); Efremov, *et al.* (1999); Sokolova (1999).

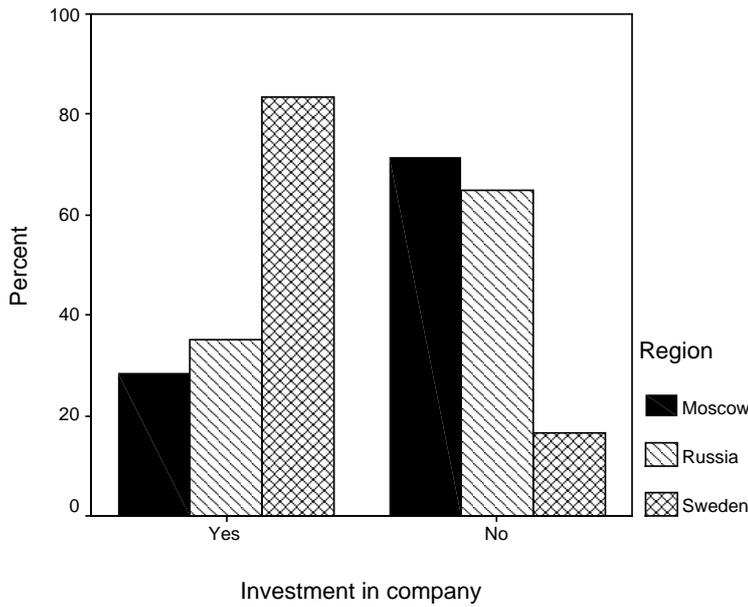


Diagram 5:3. Investment among forest enterprises in Russian regions and Sweden (N=243).

In some other regions, such as Arkhangelsk and Karelia, enterprises perceive a shortage of timber. This is not the case in Moscow Oblast, however. More than 70 percent of the firms state they are able to procure the amount of timber they need (Diagram 5:2). This is perhaps not surprising given the fact that Moscow Oblast has no large pulp and paper industries. Besides, as stated earlier, only five of the sawmills use more than 20 000 m³ of roundwood per year (of a total production of 840,000 m³).

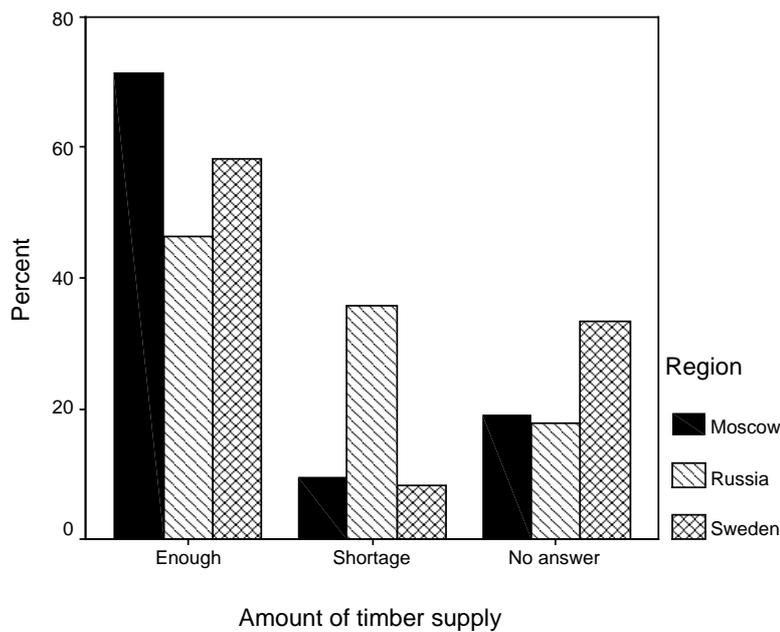


Diagram 5:4. Wood supply among forest firms in Russian regions and Sweden (N=243).

It should also be remembered that Moscow Oblast is an importer of wood products, with 90 percent of the paper supplied from outside. As can be seen in Appendix 1, a significant number of firms are engaged in import (see also Table 1:2). Thus, it is probably fairly safe to conclude that the reason why wood supply is regarded as large enough reflects the circumstance that most of the timber is imported rather than produced within the Oblast.

Business Behavior

As has been emphasized earlier, Moscow Oblast is an “importer” rather than an exporter of wood. Thus, less than 20 percent of the companies (four enterprises) in our sample export their products, among the other Russian firms in our survey the corresponding figure is around 40 percent. Another difference is that the forest firms of Moscow Oblast are more inclined to perform their monetary transactions through the bank system. Although barter is widely practiced, around 60 percent of the firms arrange their payments through the bank system. This can probably be explained by the fact that the Moscow region is more developed in this respect. Generally, business activities as well as the number of banks and financial institutes, are more numerous closer to the capital Moscow.

As can be seen in Diagram 5:5, however, it seems as if forest firms in Moscow Oblast live a more risky life. The vast majority of the representatives of interviewed firms consider violation of selling agreements to be a big problem. This is a much more common opinion in Moscow Oblast than among forest firms in other regions.

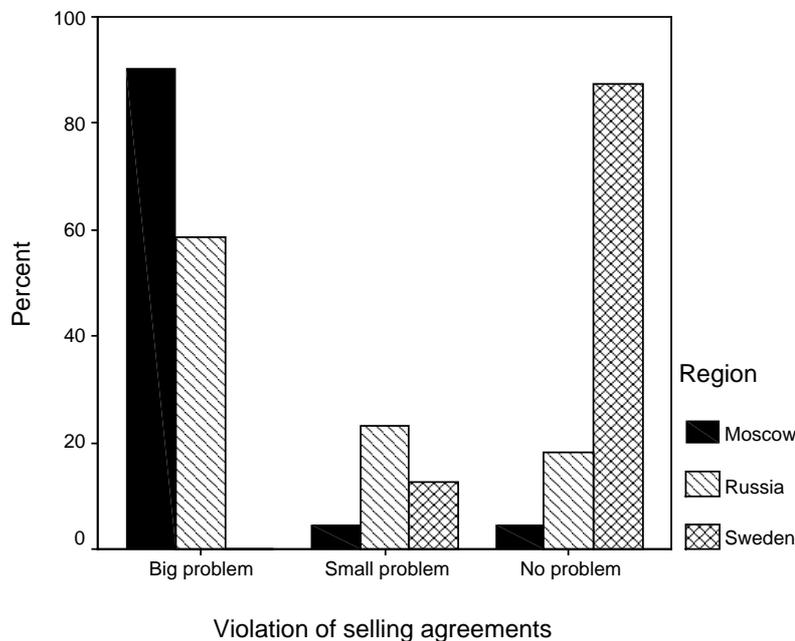


Diagram 5:5. Violation of selling agreements among forest firms in Russian regions and Sweden (N=243).

One likely explanation can be attributed to the economic activity, which is much higher in the Moscow region as, for example, compared to Siberia. This, in combination with the proximity to the capital, presumably attracts a significant number of “audacious” and cunning actors more interested in short-term profit than in long-term business building.

The representatives of the forest firms were also asked how they usually deal with problems of violation of agreements. Two answers dominate among the forest firms of Moscow Oblast (Diagram 5:6). The first and most common answer was that they used to negotiate with the transgressor. The second answer, which applies to more than 20 percent of the firms, was that nothing happens.

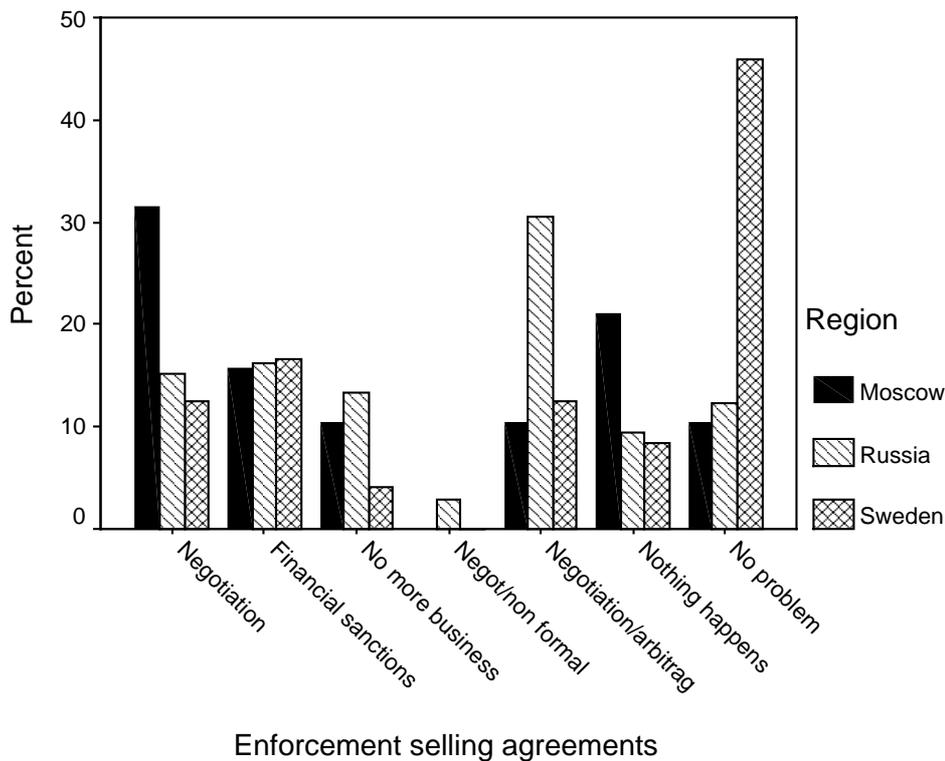


Diagram 5:6. Sanctions in cases of violations of selling agreements among forest firms.

A look at the corresponding figures from the Swedish enterprises indicates the magnitude of the problem. The likelihood of getting anything back once you are cheated is low. This opens up alternative, non-legal ways of enforcing contracts which, in turn, contributes to a general criminalization of the economy. Recent research indicates, however, that the arbitrage system is gradually gaining more support among Russian business actors (Hendley *et al.*, 1999; Pappila, 1999). From the perspective of transparency and predictability, and thus the eventual successfulness of the market economy, such a development must be regarded as something valuable. This development cannot be verified by consulting our Moscow Oblast interviews, however.

Problems and Possibilities

One obstacle for restructuring the Russian enterprise sector that is commonly propounded by observers and researchers of the Russian economy is that the process is hampered by the extensive involvement by enterprises in the provision of social services to their employees and the communities in which they are located. However, in our sample of Moscow enterprises only a few have such commitments. Among the rest of the forest firms that were interviewed around 60 percent are engaged in such activities. Thus, it can be concluded that it is not their social engagements that prevent firms from adapting to the principles of a market economy. How, then, do enterprise managers look upon the situation of their firms? All respondents were asked what they regarded as the most binding restriction for operating the firms. Their answers are illustrated in Diagram 5:7.

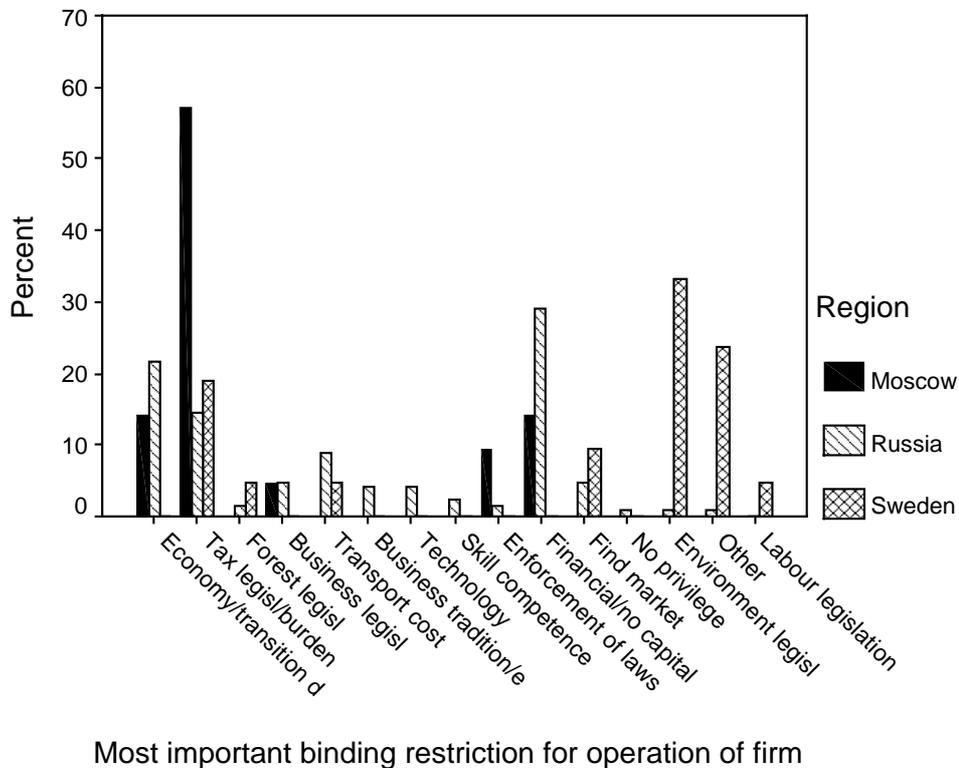
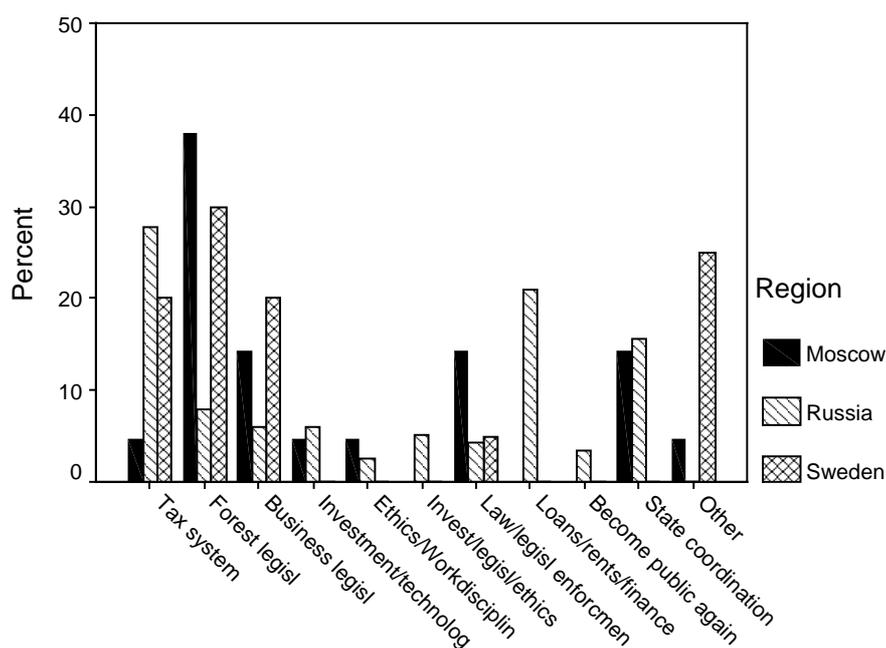


Diagram 5:7. Perceived restrictions for running forest firms (N=243).

As can be noticed, economic issues dominate, especially the taxation policy is regarded as an obstacle, followed by what can be called the “general economic situation.” When asked for other obstacles, in addition to the most binding, the most frequently mentioned was a lack of, or complaints about, machinery, technological skills and competence. It should be noted that finding a market is not regarded as a primary problem, something that verifies the earlier statement that Moscow Oblast enterprises face good prospects for expanding their markets, if they only could. Obviously, there are other issues which surpass the finding-a-market problem. What are these issues in the eyes of forest enterprises, and what do their representatives suggest in order to solve or mitigate the problems? This is illustrated in Diagram 5:8.



Important changes in Russian forest sector

Diagram 5:8. Important changes in the forest sector suggested by representatives of forest firms (N=243).

One might expect that since most respondents have the opinion that the taxation policy is the primary problem changes in the taxation system would be suggested as a remedy for the sector as a whole. This is not the case, however. As can be seen in Diagram 5:8, the current forest legislation is target number one followed by the business legislation. This might be quite logical. The forest code contains, in fact, a mixture of rules and regulations on pure forestry issues and stipulations about fees and taxes (see the earlier discussion in Chapter 3). Thus, one can expect that forest firms regard some of the rules in the forest legislation as belonging to a huge complex which is subsumed under the heading “taxation”. In fact, some observers have described the Russian taxation system as “draconian” (Rogfalk, 1996:7 ff.).

6. Alternative Forest Sector Development Scenarios

The future development of the forest sector of Moscow Oblast depends upon a great number of economic, social and ecological factors. The most important of them are the future changes in the Government’s economic policy (including policies on taxation and investments), the forest policy, the economic and financial mechanisms, the system of forest resource use and reproduction.

Here we consider two basic scenarios of the future forest resource use and reproduction (the table in Appendix 2 gives some of the assumptions behind the calculations). The first scenario is based on an extrapolation of current trends in the forest sector, while the second scenario explores the potential of a sustainable forest resource use. For this

purpose a large-scale forestry scenario model has been used. The model has been elaborated by the Department for Long-term Prediction of the All-Russia Research Institute for Silviculture and Forestry Mechanization.⁹ The most important distinguishing features of this model are that it combines two major classes of models for timber assessments — simulation and optimization; it calculates alternative structures and levels of forest resource use in coordination with forest resource reproduction; it has a dynamic systems approach, which entails the transformation both of goals and forest resources according to changes in future demand of forest products; it allows user specification of the amount of detail (the lowest level is the forest stand) taken into account; it is possible to take account of non-wood benefits, such as carbon accumulation, plant products, etc.

The computer implementation allows the calculation of the volume as well as the value of the allowable cut, including the economically accessible cut. The most important input variables are data on forest inventory at forest stand or aggregated level (economic units which includes forest stands within a selected region or subregion with united silvicultural and economic goals, species composition, similar productivity and other variables); yield and wood quality tables; wood harvest technologies; alternative scenarios of forest resource reproduction; norms characterizing the impact of the quality of silvicultural measures on the structure and volumes of the allowable cut; economic data (such as costs for forest resource reproduction, management, harvesting; stumpage and roundwood prices).

Simulations were carried out for the rotation period of coniferous forests. Results are reported in time-steps of ten years. The economic calculations were made for 20–30 years. The model output consists of alternative volumes and values of allowable cut, the resulting age class structure, growing stock and harvested timber quality, as well as the economic efficiency of alternative scenarios of forest resource use and reproduction.

Scenario 1: “Business as Usual”

The first scenario is based on the assumption that no radical changes in the Government’s economic policy will be made in the foreseeable future. Most Russian and foreign experts seem to agree that the probability of radical political and economic changes in Russia before the presidential elections of 2000 is very small.

Looking at forests which are not going to be exploited in the next ten years, it was found that aspen stands will be characterized by an absolute (about 90%) prevalence of mature and over-mature stands. In about 30 years, the situation will be similar for birch stands.

Coniferous stands are characterized by a dominance of middle aged trees (about 52%). In 30 years, about 80 percent of coniferous forests will consist of mature, over-mature and premature stands. According to Isaev *et al.* (1995), mature and over-mature stands cannot function as carbon storage at all, and for premature stands this function is insignificant. As a consequence, the carbon accumulation function of hardwood stands (which constitute more than 50 percent of the region’s forests excluded from exploitation) will be reduced by about 70 percent in 10 years, and in 20–25 years this

⁹ The details of the model can be obtained by contacting this institute.

ecological function will be close to zero. Coniferous stands will lose their carbon accumulation function in 30–40 years.¹⁰

If the existing forest resource use and reproduction regime is maintained the forest stands will more or less entirely lose all other functions too in the nearest future, such as their potential for exploitation, recreation, soil and water protection, etc.

Looking at exploitable forests the situation does not yet look as dramatic. However, because of the low demand for wood products the relation between actual and allowable cut is decreasing. The efficiency of forest resource reproduction is relatively low. The species composition as well as the age structure of coniferous forests are deteriorating. As a result of what has been outlined above, the volume of economically accessible allowable cut will be progressively decreasing. The only significant difference between the dynamics of the two types of forests consists in the varying rate of deterioration of the productive capacity of forest ecosystems, their health and vitality.

In the event that the existing forest resource use and reproduction system is maintained there is no doubt that the region's forest ecosystems will be unable to satisfy the demand for wood and non-wood products and services already in 20–30 years. A radical change of economic policy is a necessary precondition for solving all the forest sector socio-economic and ecological problems. The maintenance of existing institutional arrangement in the forest sector will lead to very serious negative economic and ecological consequences.

Scenario 2: “Institutional Change”

The main target of the second scenario is ensuring an environmentally sustainable management of the forests. This target requires an improvement of the productive capacity of forest ecosystems; maintenance of their health and vitality; an improvement of the contribution of forests to the global carbon cycle; the maintenance and increase of long-term multiple socio-economic benefits.

The second scenario requires a number of substantial changes in the existing institutional arrangement. For example, all forms of land ownership, including forest lands, should be allowed. A mechanism for the implementation of state property rights should be developed. One of the most important of these rights is the right of the owner to collect forest rent. At present only a small part of the forest rent is collected by the state that owns the major part of the Forest Fund. The main reasons for this situation are the lack of an effective price control system for the products of monopolies, the extremely high tax burden, and the very low level of stumpage prices. At the end of 1998, the average stumpage price in Moscow Oblast was only USD 0.5, or about 3 percent of the corresponding price in the United States.

The problem with unprofitable logging enterprises cannot be solved by low stumpage prices. The problem can only be solved by providing the necessary preconditions for efficiency improvements of logging operations through, for instance, a reduction of the

¹⁰ Currently a group of researchers at the International Institute for Applied Systems Analysis (IIASA) try to develop means and methods for the conducting of a full carbon analysis of the Russian forest sector. Cf. Jonas *et al.*, 1999. *Full Carbon Accounting and the Kyoto Protocol: A Systems Analytical View*. IIASA Interim Report, IR-99-025. (<http://www.iiasa.ac.at/>).

tax burden; state control of monopoly prices; the creation of a favorable investment climate; the establishment of market relations between the territorial agencies of the Federal Forest Service (as the representative of the forest owner — the State) and various forest resource users; the reduction of the interest rate for long-term and short-term credits; and the development of small businesses in the forest sector.

The provision of an effective state control of monopoly prices, as well as the withdrawal of rental for natural resource use, including the use of forests, are necessary preconditions for raising the purchasing power of the population as a means of stimulating the demand for forest products.

In a second step the existing forest policy should be revised. First of all, it is necessary to elaborate and implement a policy related to the forest sector as a whole. The Forest Code should provide the legal basis for dividing the state ownership of forests between the Federation and the Subjects of the Federation in order to balance the rights and responsibilities of all forest owners. Such division should be provided in accordance with the ecological, social and economic role of forests.

For privatized logging enterprises, a separation of the public administration function from the economic function of state owned forests is necessary from a legal as well as an economic point of view. For state owned forest and logging enterprises the situation is different. A special investigation is needed in order to clarify the optimal solution of the problems just mentioned. In some cases, the establishment of complex enterprises carrying out all silvicultural measures, as well as intermediate and final cuttings and timber processing, might increase the efficiency of forest production. Of course, the organizational and production structure of such enterprises should be determined with regard to their competitiveness. The function of forest regulation (administration) in such a case might be provided by the existing federal and regional forest service bodies. If necessary, district forest inspections might be established.

A crucial condition for the possibilities to implement this scenario is that the existing cost orientation in the economy is transformed into a customer orientation. First of all, it is necessary to overcome the old way of thinking in the forest administration, in particular to abandon the strive to increase production output even if it is detrimental for quality. The planning system of forest resource reproduction is still oriented towards achieving various separate tasks, such as planting, thinning, etc. Because of the shortage of funding, which was mentioned above, the efficiency of silvicultural measures is very low. As a consequence, the targets of silvicultural measures are often not reached, which causes an increasing imbalance between future demand and supply of high quality wood resources. A methodology for the formation of market relations, including a program for goal oriented planning, has been elaborated (Kleinhof, 1992, 1996; Losev, 1998). The authors believe that an implementation of that methodology would contribute to an improved system of forest planning in a market economic context.

If all of the above mentioned preconditions for the second scenario were at hand, the productive capacity of the Russian forest ecosystems could support an efficient forest resource use and reproduction. The level of sustainable annual allowable cut could be more than doubled and the carbon accumulation function of various species could be increased by 200–500 percent. The species composition and the age structure could be

transformed in order to meet the demand for wood and non-wood products and amenities (cf. Diagrams 6:1 and 6:2).

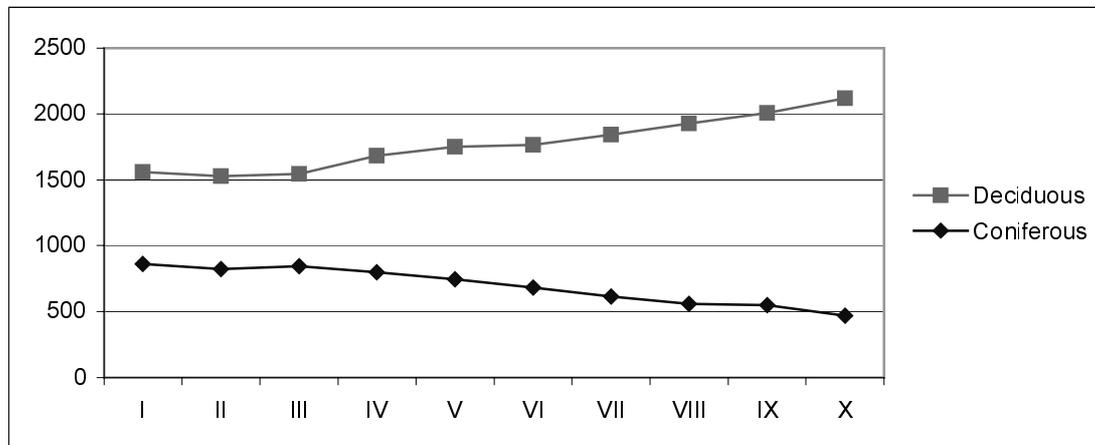


Diagram 6:1. The “business as usual” scenario. Volume (1,000 m³) of sustainable allowable cut in Moscow Oblast. Projection for 100 years (decade I-X).

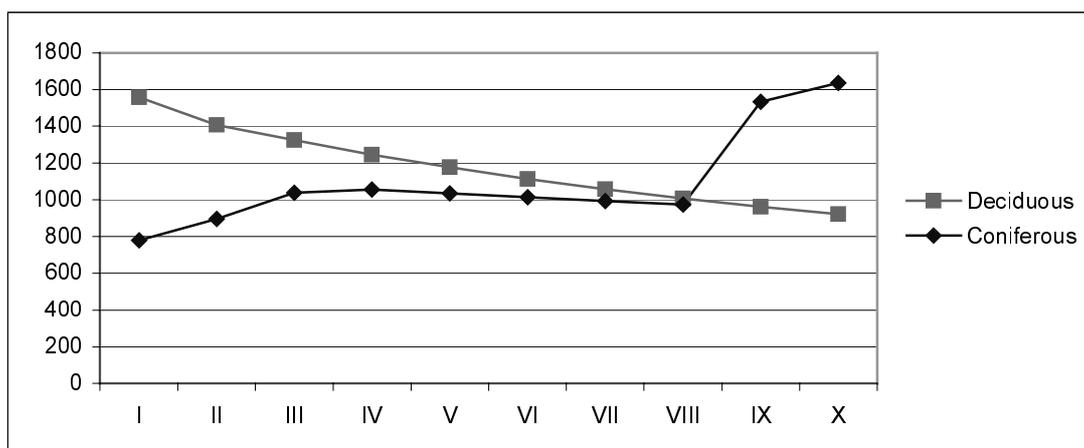


Diagram 6:2. The “institutional change” scenario. Volume of sustainable (1,000 m³) allowable cut in Moscow Oblast. Projection for 100 years (decade I-X).

The implementation of the second scenario requires the establishment of an adequate institutional arrangement, as well as a significant volume of investments. For example, the volume of reforestation would have to increase by nearly 150 percent in comparison with the current level.

One of the paradoxes of the Moscow forest sector is the low demand for domestic roundwood. At the same time, the volume of roundwood necessary for satisfying the demand for sawnwood, plywood, paper, paperboard and other wood products exceeds the actual cut by nearly 800 percent. Due to the lack of production capacity for paper and paperboard in Moscow Oblast, we have only calculated the volume of roundwood necessary for producing sawnwood and wood-based panels. However, even in this case the necessary amount of roundwood exceeds the volume of allowable cut for coniferous

forests by more than 100 percent. The volume of allowable cut might also be increased through legal means. According to the Forest Code of the Russian Federation (Article 55), decisions on the prohibition of final felling operations on specially protected forest sites shall be made by the government bodies of the Subjects of the Russian Federation upon the request of the territorial agencies of the Federal Forest Administration. However, the most severe environmental and economic problems of the Moscow forest sector can largely be solved through changes in the institutional setting.

Assessments of Russian and international best practices have shown that the optimal management strategy for such a forest should be based on selective cuttings. An increasing supply of standing timber is one of the preconditions for an increased use of logging capacities. According to our calculations, with a low demand for hardwood as well as for small-sized coniferous timber, selective cuttings could reduce the costs of roundwood production in many cases. Furthermore, selective cuttings reduces reforestation costs. These differences should partly be used to induce logging enterprises to increase wood harvesting in Moscow Oblast. Due to the extraordinary ecological role of the Moscow forests and the corresponding ecological constraints with regard to harvesting technologies, preferential taxes for logging enterprises should be implemented.

Taking all of the above together should contribute to a decrease in harvesting costs and a rise in competitiveness. In order to meet future demands for timber and other forest resources, the allowable cut should be increased more than what is suggested in the second scenario. The main target of our investigation was not to make detailed calculations of the alternative scenarios of forest resource use and reproduction, but rather to demonstrate the necessity of radical institutional transformations as a necessary precondition for solving all of the problems related to forest sector development.

7. Conclusions

The basic question to be answered is to what extent the forest sector of Moscow Oblast has moved towards a market economy. Since it is not self-evident what is meant by that a number of rather general criteria can be used for such an assessment (cf. Carlsson and Olsson, 1998:Ch.1; Carlsson *et al.*,1999:Ch.1):

- Constitutional rules are acknowledged and transparent.
- The structure of property rights is settled, i.e., private actors can acquire property or at least get the right to utilize property for their own benefit.
- Rules and regulations from official authorities are regarded as legitimate, and apply equally to similar actors.
- The market decides prices of property and goods.
- Decision-making regarding collective choice and operational rules is decentralized.
- Private investors can realize the returns on their investments.
- Rules are enacted aimed at preventing the devastation of natural resources.
- Legitimate authorities take measures against violations of rules.

It should be evident from previous chapters that none of these criteria are fulfilled. The forest sector might have been affected by the sweeping changes of the dismantling of the Soviet state, radical privatization is one example, but there is still a significant distance to cross until the sector is adapted to the principles of a market economy.

In 1997, the report *Russia. Forest Policy During Transition* was published by the World Bank. The report was prepared in close cooperation with Russian experts. Not unexpectedly, one of the critical issues of the forest sector reform was seen to be the integration of the forest sector in the overall economic reform. However, by the end of the 1990s economic reform in Russia has come to a critical point. The Russian government seems to have “forgotten” that the necessary large-scale institutional changes have to be implemented without causing too much disturbance, since the economy must continue to function and the various needs of the population must continue to be satisfied (Dewatripont and Roland, 1996). Moreover, maintaining the present social and economic policy is very dangerous and may threaten the formation of a democratic Russian society. Thus, the structure and the quality of the institutional configuration of the Russian forest sector largely depends up on the type of social and economic development that will take place in Russia in the near future. The problems of institutional arrangements related to the forest sector can not be resolved without developing an appropriate nationwide legislative and economic framework in accordance with market economic principles. In this context such problems as the implementation of legislative acts, including land property rights, the withdrawal of forest rent from the federal budget and the formation of nationwide ethical norms in business practice should be mentioned.

Under the current economic circumstances in Russia it is impossible to improve the situation without the appropriation of natural resource rent from the federal budget. Resolving the above mentioned problems is a necessary prerequisite for the implementation of any forest industry restructuring program. No significant changes in the structure of wood consumption will occur in Moscow Oblast without capital investments in the woodworking and pulp and paper industries, most of which are still oriented to the utilization of high grade coniferous raw wood (Moiseev and Kozhukhov, 1997).

Forming an adequate institutional framework is not possible without a comprehensive integrated policy for the forest sector as a whole. In 1997, an attempt to formulate such a policy was made by leading Russian forest economists. However, this is only a first step towards the solution of the problem. A strategic program for the development of the forest sector should be elaborated at the national level in order to have the principles fixed in legislative acts. Moreover, it is necessary to change the existing practice for the elaboration of forest policies and development programs. Even the latest federal programs (from 1996) were elaborated separately — one program for the forest industry and another for forestry.

In the opinion of leading Russian forest economists, for example Moiseev (1994), Moiseev and Burdin (1997), Kozhukhov (1997, 1998), Burdin (1992, 1997), and Petrov (1994, 1997), it is necessary to reconsider some principal forest policy issues. The most significant among them concerns the foundation of a coherent and adequate forest management model. In particular, it has been suggested that it might be useful to draw upon Canadian experiences of forest management and adapt these to the conditions

prevailing in Russia. However, in the opinion of leading Canadian economists (e.g., Luckert and Halley, 1994), the Canadian forest management system also has serious shortcomings. Under the conditions prevailing in Russia there are additional obstacles, which might make the Canadian model ineffective. The most important obstacles are the weak motivation of the forest administrative personnel (due to the low wage level), the insufficient funding of forest management activities from federal and regional budgets, and the great differences in natural and economic conditions in various parts of the Russian Federation. However, the Forest Code only envisages one general forest management system.

The Functioning of the Forest Sector Organizations

In order to reach a deeper understanding of the problems discussed above, it is necessary to investigate the structure and the quality of the institutional configuration as an integral part of Russian economic reform. In the Russian context (like anywhere else in the world) one should not look upon officially expressed intentions as necessarily implying the existence of a comprehensive social and economic policy. We have already discussed the most important inconsistencies and shortcomings in the economic and forest legislation. The transition process from an administrative command economy to a market system in Russia is far from completed. There is, in fact, not yet any economic mechanism or effective implementation control of legislative acts and government resolutions at the federal and regional levels.

The strategy and program for a sustainable development of the forest sector is an example. As a consequence of the high tax burden and the unfavorable investment climate neither private nor state enterprises can realize the returns on their capital. Under such circumstances, it is difficult for the various forest sector organizations to be profitable at least if they are to function in accordance with official intentions. Firms and other commercial organizations try to decrease the tax burden in various ways; they deliberately distort data on production volumes and costs, they use barter trade, they overstate the number of employees, they work on the black market, etc.

In accordance with the Forest Code units belonging to the Federal Forest Service cannot engage in profit-making activities, including industrial logging and timber processing. However, the Forest Code gives contradictory information about the functions of *leskhozy* and national parks. While these units *de jure* are public administration bodies, they *de facto* remain state enterprises engaged in forest management activities. For example, according to Article 91 of the Forest Code, the responsibilities of the *leskhozy* could include intermediate cuttings to increase forest productivity if there are no other users to perform these cuttings. Moreover, the Federal Forest Service considers income from intermediate cuttings as one of the sources for financing expenses for forest reproduction. It is well known that intermediate cuttings are profitable only under specific conditions. In Moscow Oblast such conditions exist for *leskhozy* located near particleboard or fiberboard factories, which can use low-quality and small-sized roundwood. Consequently, in the present economic situation, *leskhozy* would like to remain *de facto* state enterprises engaged in forest management activities, including intermediate cuttings.

As a rule, the financing of expenses for forest reproduction from the budgets of the Subjects of the Russian Federation is insufficient. That is why *leskhoz*y sometimes use a part of their income from forest management activities in order to settle wage arrears. In accordance with the Forest Code *leskhoz*y are obliged to carry out all forest management activities in line with specific quality standards. However, the financing of expenses for forest reproduction are often insufficient for providing the necessary volume and quality of silvicultural and other forest management activities.

A serious problem is the so-called “non-targeted” use of budget funds. The forest sector is no exception. According to *Rossiiskaia gazeta* (30 September 1997) *Roslesprom* has spent a part of the governmental credits intended for developing forest export activities on other purposes. Such “non-targeted” use of ecological and other special budget funds and credits are often the cause of wage and pension arrears. The official system of rules that governs activities in the financial sphere has created a favorable environment for various manipulations with budget funds and credits. The Central Bank of the Russian Federation assigns credits to the commercial banks at a relatively low interest rate (about 10%). At the same time enterprises have to borrow money from commercial banks at very high percentage rates (about 30% or more). These problems might not be solved solely on the regional level. The same is true for the legal framework the authorities are supposed to provide.

It seems that in order to make the forest legislation work more efficiently the following changes would be necessary:

1. The Forest Code should consider all forms of forest ownership, including private ownership, in order to regulate the process of privatization of a part of the forest.
2. The authorities should work out and adopt a Private Forest Ownership Act, which should provide a legal framework for the ecological and economic supervision of the State.
3. Transparency should be promoted through solving the issue of dividing State ownership of the forests between the Russian Federation and the Subjects of the Federation, as well as solving the issue of balancing forest ownership rights and responsibilities between various levels of forest management.
4. The Federal Forest Service must have the right to control the stumpage price level in order to guarantee the necessary funds for implementing the basic principles of forest management, such as multi-purpose, continuous, non-exhaustive use of the Forest Fund, and sustainable development of forest ecosystems.
5. Only the rental part of the money obtained from payments for the use of the forest fund should be transferred to the Federal budget or the budgets of the Subjects of the Federation (depending on the form of ownership). The other part of these payments should be transferred to the Federal or Regional bodies of the forest administration to finance expenses for forest resource management and forest reproduction.
6. It is also necessary to revise the legal framework for state administration in regard to use, control, and protection of the forest fund and forest reproduction in accordance with market economic principles.
7. For the implementation of an effective state administration system applied to forestry a legal framework that is conducive to the development of the market economy should be worked out. These efforts should provide for the following: new economic

methods of forest resource allocation, their use and reproduction; the economic interests of forest owners and forest resource users; economic incentives for the staff of federal, regional and local administrations to increase the efficiency of forest resource use and reproduction in accordance with economic interests of forest owners and forest users.

8. Finally, in order to be effective the Forest Code must be understood, acceptable, and beneficial to the majority of the people it affects. In this context the people's participation in the implementation of the Forest Code should not be underestimated.

Paradoxes and Possibilities

The situation in the forest sector of Moscow Oblast is quite paradoxical. The central variables for production and trade are at hand:

- 1) There is a regional market for wood products.
- 2) In general, forest firms do not encounter any supply problems.
- 3) The capacity of the existing forest industries is underutilized.

The question remains, why do they not produce and trade? A number of answers can be given. The first has to do with the old Soviet image of the concept of specialization. Moscow Oblast has never been specialized in timber production, but rather on furniture and similar processing activities. According to the classification nomenclature from the Soviet Union time, a specialized industrial branch is a branch in which the production output exceeds the production demand in the territory in which it operates. This way of defining specialization does not comply with how the concept is used in Western capitalist countries. The Russian concept rather reflects the idea of a regional division of labor. This policy might have the effect that the Moscow Oblast enterprises continue to import wood from other parts of the federation because they have already established systems for doing so.¹¹ One obvious example is the import to pulp and paper industries that exists while no significant harvesting of pulpwood, such as birch, is done.

If market principles would prevail all those industries which import wood should substitute "foreign" suppliers for local ones if their prices were lower. However, due to a number of reasons local firms cannot compete this way. The most important circumstance is that the timber price is decided by means of administrative procedures and cannot decrease below a certain level.

This is connected to another feature of the Moscow Oblast forest sector. Final felling is heavily restricted and if harvesting firms are to continue their activities they must convert to intermediate cutting — only one third of the AAC is harvested and the 90 million m³ of wood that could be harvested annually should mainly be obtained through intermediate cutting. However, since technology and skills are inadequate for this kind of harvesting firms cannot utilize the opportunities that are provided. And, as a result local firms are unable to compete with imports from other regions and from abroad.

¹¹ However, as a consequence of the devaluation of the ruble after August 1998 the total volume of Russian import has fallen significantly and import prices in rubles have drastically increased. It should be mentioned that until August 1998 Moscow city imported about 80 percent of all consumer goods. The subsequent drastic increase of import prices lead to a rising demand on domestic goods.

This has to do with yet another circumstance, namely that the bankruptcy system does not work. This has the effect that ineffective producers and suppliers of timber can continue their activities without any economic justification. How could local providers be able to drive firms currently supplying Moscow Oblast with wood out of business if those firms are supported by authorities with the help of tax relief, special agreements, and in the worst case criminal transactions?

A fifth explanation of the deadlock in the Moscow forest sector can be attributed to the relatively high purchasing power among customers in the Moscow area. For the forest sector this has the effect that people, if they prefer, can afford to purchase foreign instead of locally manufactured products. It is obvious that this has affected the Moscow Oblast furniture production. The only way to meet this situation is to improve quality and to compete with prices.

Finally one should contemplate the possibility that there might be no obvious logic in how affairs are set up in contemporary Russia. We are in the middle of a political and institutional turmoil. Since this is the case, one should not expect that the flows of wood, products, or money follow logical tracks. Sometimes this may be the case, other times not, everything depends on how individual actors happen to utilize opportunities that are randomly given in the unstable situation.

Light in the Darkness?

In 1998, the output of the Russian wood-based industries increased slightly, with about 1.2 percent, in comparison with 1997. In 1999, contrary to most economic forecasts, a significant growth of Russian industrial output has been noticed, first of all of within manufacturing. According to Goskomstat the output of forest industry products increased by 14 percent during the first eight months of 1999 in comparison with the corresponding period of 1998. The output increase of particle board, wood pulp, paper and paperboard has been even more significant, about 20–28 percent. The general situation for the forest industries still remains very difficult, however. The increase in forest production in 1999 has only occurred in half of the regions. As a rule, the largest increase in forest production has taken place in regions situated close to foreign markets, such as the North-west region, Khabarovsk Krai, etc. This recent increase of output was mainly prompted by a growing export.

When it comes to products such as furniture, paper, paperboard, and some types of fiberboard, a significant import substitution should be mentioned. As a consequence of rising import prices people are to a greater extent forced to buy domestic products, such as furniture, paper sacks, etc. The situation is similar in other industrial branches, where increases of production output have also been significant. It should be remembered that until August 1998 Moscow city imported about 80 percent of its consumer goods.

It is necessary to point out that the increase of industrial production cannot be equalized with economic growth. First of all, the increase of the output of industrial production has neither taken place in all branches, nor in all regions. Secondly, the increase in industrial production cannot be attributed to increasing purchasing power among the Russian people. On the contrary, only in September 1998, after the devaluation, the real income level fell by 30 percent. This low purchasing power prevailed during 1999. In

July, prices for consumer goods and services increased by more than 3 percent. Finances still depend more on oil prices than on revenues from domestic sectors. Further uncertainty over the economic future is reflected in ruble-dollar rates. For the year 2000, the federal budget authorities expect a ruble-dollar rate of 32 rubles/US dollar.

However, the economy can still be characterized as being in a state of crisis. As has been mentioned above, in order to overcome this socio-economic crisis, fundamental changes of the Russian economic policies and institutional arrangements are necessary. Such changes cannot be expected in the present period of pre-election campaign. But the future development of the Russian economy will partly depend upon the results of the upcoming parliamentary and presidential elections.

Recommendations

Some recommendations have been given earlier in this chapter and most of those that have been presented earlier in other case studies also apply to the situation in Moscow Oblast (cf. Carlsson and Olsson, 1998; Carlsson, Lundgren and Olsson, 1999; Carlsson *et al.*, 1999). Applied to Moscow Oblast our main recommendations can be summarized as follows:

- Regional authorities and others should withdraw from most of their engagements in single firms. When such engagements are needed the reasons should be openly declared and justified.
- The overall task of political authorities in Moscow Oblast should be to minimize or eliminate political risks in order to achieve economic growth. For example, all types of *ad hoc* regulations, such as retroactive rule-making, should be immediately stopped. Politicians and related officials should promote institutional stability and, thus, transparency of rules, which will subsequently increase predictability.
- In order to stimulate, or increase the likelihood of, the establishment of “real” branch organizations officials should withdraw from the type of corporatist organizations that has been created.
- The authorities should pay great attention to the task of making regulations more simple and contradictions between various rules should, if possible, be eliminated.
- Together with other actors regional authorities should develop programs in order to stop the deterioration of education and to increase management competence in the forest sector.
- Activities of independent actors should be encouraged and supported, thereby counteracting a further bureaucratization of the forest sector. For example, programs deliberately aimed at stimulating the establishment and development of small and medium sized enterprises should be constructed, provision of economic guarantees should be considered as well as economic support of entrepreneurship.
- All private actors in the forest sector as well as the regional authorities must find ways of releasing industries from their social commitments. For example, privatization of apartments should be increased and supported.

- All concerned parties should try to find economic support for deliberate programs aimed at renovating apartment houses, repairing public buildings, roads, and other infrastructure facilities. As a side effect this might increase the regional demand of forest products.
- More emphasis should be paid to develop skills and technology to increase the ability to perform intermediate cutting. In addition, the quality of locally produced wood products should be increased.
- Political authorities as well as the authority of the police should be used to secure that firms have the possibility to reinvest the income of their trade, thereby making their production more efficient. Firms have no incentive to generate money that will end up in a draconian tax system or in the hands of organized crime.

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Appendices

Appendix 1. Main Activities of Some Forest Industrial Companies

- JSC Rosbumoptorg: delivery of paper and paperboard, products of wood chemical and microbiology industries from the enterprises of Russia; wholesale trade in goods; carrying out operations in export and import of pulp and paper.
- JSC Bumaga: exporter, organizes export of pulp and paper products; organizes investing of construction and technical re-equipment by making up credits, search for investors.
- OJSC Mebeldrev: scientific and technical production support, performs supplying and commercial, financial and economic, foreign trade marketing.
- JSC Trading House Les: marketing, goods exchange on barter basis, exports and imports of logging, woodworking and pulp and paper industry products.
- JSC Trading House Bumaga: export deliveries of paper to the countries of the CIS and former CIS countries; provides product transportation and storage services.
- JSC Exportles: exports and imports timber, pulp and paper products; import of complete lines, machines, equipment, materials and services for enterprises of the forest sector.
- JV Vneshles: export of timber, pulp, paper, paperboard and other products of forest industries; assists all interested enterprises in the organization of forest trade.
- CJSC “Russian forest exchange”: trade in forest products, in particular purchase of forest raw materials, and products of wood, specialized machines and equipment, export of forest products.
- Union of wood exporters of Russia: coordinates foreign economic activities of Union’s members to provide most favored nation treatment for Russian wood export.
- Union of Forest Industrialists: coordinates production and economic activities of the Union’s members; represents the interests of the Union’s members *vis-à-vis* the state.
- CJSC Investles: technical assistance in construction, reconstruction and operation of the objects abroad, export and import machines, equipment, materials and services.
- OJSC Lesmash: performs activities to meet the requirements of the Russian harvesting companies for complete sets of logging machines and equipment.
- JS commercial bank Lesbank: offers all kinds of banking services.
- Russian JS commercial bank Roslesinterbank: offers complete financing and other banking services.
- JS forest industry bank Lesprombank: performs all kinds of banking operations.

Appendix 2. Selected Statistics Describing the Alternative Scenarios of Forest Resource Use in Moscow Oblast

Statistics	Unit	1998	Projections 2048	
			Scenario 1	Scenario 2
Allowable non-exhaustive cut, total	1,000 m ³	1,731	1,050	5,160
of which:				
coniferous		604	460	2,290
Value of the total allowable non-exhaustive cut in current stumpage prices	USD 1,000	3,836	2,540	15,375
Coefficient of carbon accumulation capacity				
- for coniferous		0.72	0.22	0.87
- for hardwood species		0.33	0.14	0.68
Share of coniferous of the total forested area	%	47.5	38.5	62.4
Share of aspen stands of the total forested area	%	9.7	15.2	4.1