

Forest Code of the Russian Federation: a challenge from market and the environment

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Anatoly Petrov (born in 1938) graduated as engineer-economist from Leningrad Forest Academy in 1960 specializing in forestry economics.

In 1966 - candidate of Ec.Sc., since 1973 - doctor of Ec.Sc.

Since 1963 up to 1989 worked in Leningrad Forest Academy.

Since 1977 up to 1988 - vice-rector of Academy on research and international relations.

Since 1989 up to now - rector of Russian Institute of Continuous Education in Forestry.

The scientific specialization: forestry economics, forest policy, forest administration and management.

Mr.Petrov published 370 books, articles and reports, including 7 textbooks.

Mr. Petrov is scientific supervisor of 75 Candidates of Ec.Sc and 8 Doctors of Ec.Sc.

1990-1995 - Member of IUFRO Executive Board

1998-2004 - Member of the European Forest Institute Board

Member of Russian Academy of Natural Sciences.

Honoured Science Worker of the Russian Federation.

Foreign member of the Royal Swedish Academy of Agriculture and Forestry.

Prise Winner of Alfred Toepfer Foundation in Forestry, 2000

Foreign member of Academy of Ec.Sc. in Georgia.

Doctor Honoris Causa of Zvolen Technical University, Slovakia.

Mr.Petrov is a leader of mang international research and educational projects.He is in close cooperation with the World Bank and the ITN Economic Commission.

| Data | Measure | Total | Including | |
|---|------------------------|-------|------------------------------|--------------|
| | | | European Russia and the Ural | Asian Russia |
| Forested (stocked) area | mln. ha | 776.1 | 170.3 | 605.8 |
| Total growing stock | billion m ³ | 82.1 | 22.9 | 59.2 |
| Including: | | | | |
| Coniferous stands | - " - | 61.5 | 13.2 | 48.3 |
| Growing stock of mature and overmature stands | - " - | 44.3 | 10.1 | 34.2 |
| Including: | | | | |
| Coniferous stands | - " - | 34.2 | 6.4 | 27.8 |
| Annual growth | mln. m ³ | 994 | 377.2 | 616.6 |
| Allowable cut | mln.m ³ | 559 | 216.1 | 343.1 |

Forest Resources in the Russian Federation, 2003

| Product | Units | 1990 | 1995 | 1998 | 1999 | 2000 | 2002 | 2004 |
|--------------------------------------|---------------------|------|-------|------|------|------|------|-------|
| Final cuttings (official statistics) | mln.m ³ | 304 | 116.2 | 78.2 | 90.0 | 95.6 | 101 | 115.0 |
| Total cuttings (unofficial data) | mln.m ³ | 340 | 140 | 130 | 157 | 168 | 177 | 196.0 |
| Sawnwood | mln.m ³ | 75 | 26.5 | 18.6 | 19.1 | 20.2 | 22 | 21.5 |
| Plywood | thou.m ³ | 1597 | 939 | 1102 | 1324 | 1506 | 1808 | 2233 |
| Particle board | thou.m ³ | 5568 | 2206 | 1568 | 2763 | 3225 | 3762 | 4761 |
| Fibre board | th.tons | 9623 | 3540 | 4191 | 5352 | 6155 | 7036 | 7280 |
| Paper and paper board | th.tons | 8325 | 4080 | 3595 | 4535 | 5312 | 5921 | 6789 |

Outputs of Basic Timber and Paper Products, 1990-2004

| Product | unit | 1990 | 1998 | 1999 | 2000 | 2002 | 2004 |
|-----------------------|--------------------|------|------|------|------|------|------|
| Roundwood | mln.m ³ | 31.4 | 20 | 27.6 | 30.8 | 36.5 | 41.5 |
| Sawngoods | mln.m ³ | 15.7 | 4.6 | 6.4 | 7.8 | 8.9 | 13.1 |
| Pulp | th.tons | 993 | 1056 | 1373 | 1660 | 1885 | 1866 |
| Paper and paper board | th.tons | 2761 | 1767 | 2048 | 2299 | 2500 | 2590 |

Total export revenue – 7,4 bln. USA dollars

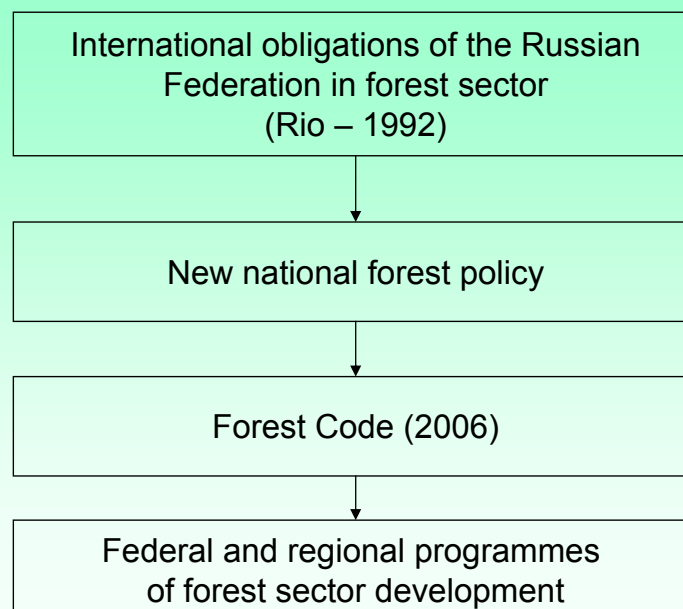
The Export of Timber and Paper Products, 1990-2004

1. Gross domestic product – 2.2
2. Export return – 3.9
3. Railway transport of cargo – 4.8
4. Industrial output – 3.2
5. Industrial employees – 7.8
6. Industrial fixed assets – 2.3

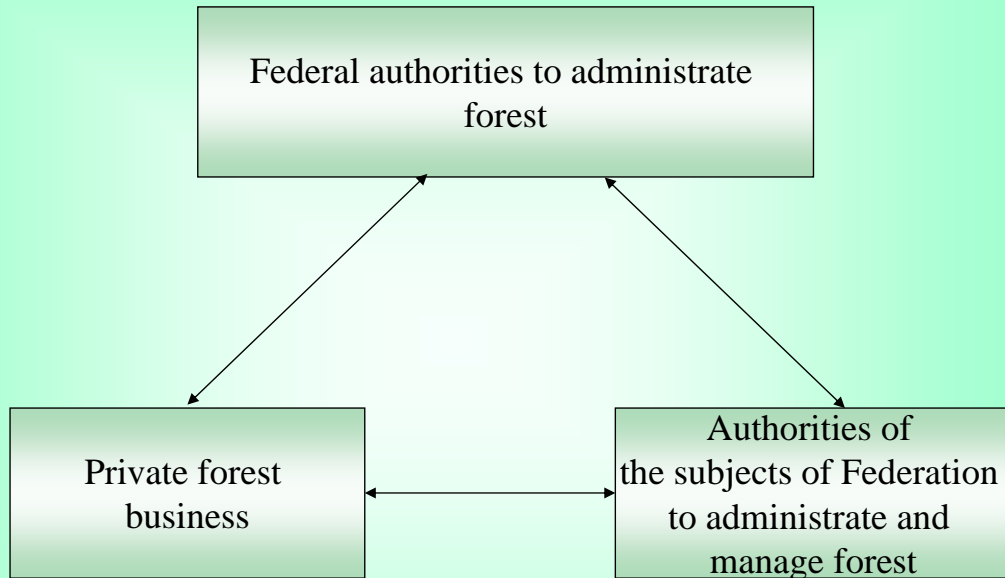
Forest sector of Russian Federation as a part of national economy (share in percent)

The key strategic goals of the new forest policy:

1. to convert the huge biological resources of wood into economic values(gross domestic product, added value and profit).
2. To establish new balance of power between Federation, Subjects of Federation and Private Business.
3. To separate forest management and forest administration.
4. To establish competitive environment in forest sector, including forest management



The road to sustainable forest management in Russian Federation



The “triangle” of problems to be solved by the new forest legislation

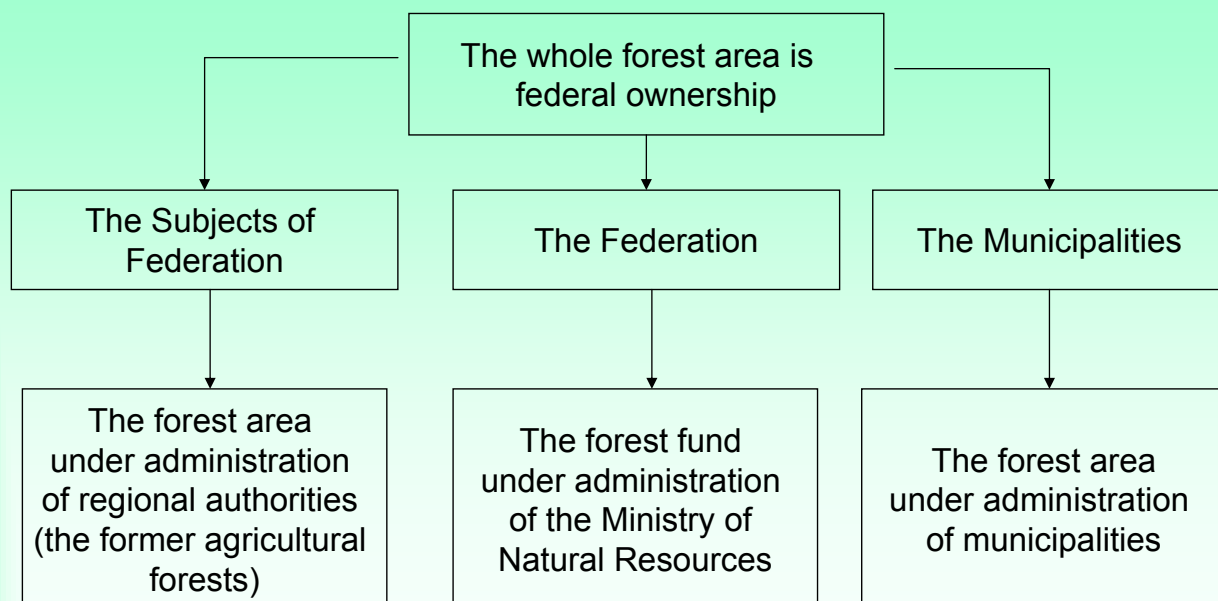
The principle of federative relations in forest sector is determined by The Constitution of Russian Federation.

According to the article 72 of Constitution all natural resources are in the common competence of the Federation and the Subject of Federation.

| Level and functions to administrate forest | | Soviet system | Basics of Forest Legislation, 1993 | Forest Code, 1997 | Federal Law, 2004 | Forest Code, 2006 |
|--|-----------------|---------------|------------------------------------|-------------------|-------------------|-------------------|
| Federation | Law- making | + | + | + | + | + |
| | Decision-making | + | o | +)*) | + | o |
| | Supervision | + | + | + | + | + |
| Subject of Federation | Law- making | o | o | o | o | + |
| | Decision-making | o | o | +)*) | o | + |
| | Supervision | o | o | o | o | o |
| Municipality | Law- making | o | o | o | o | o |
| | Decision-making | o | + | o | o | o |
| | Supervision | o | o | o | o | o |

+ - function presents, o – function absent, +)*) - common competence

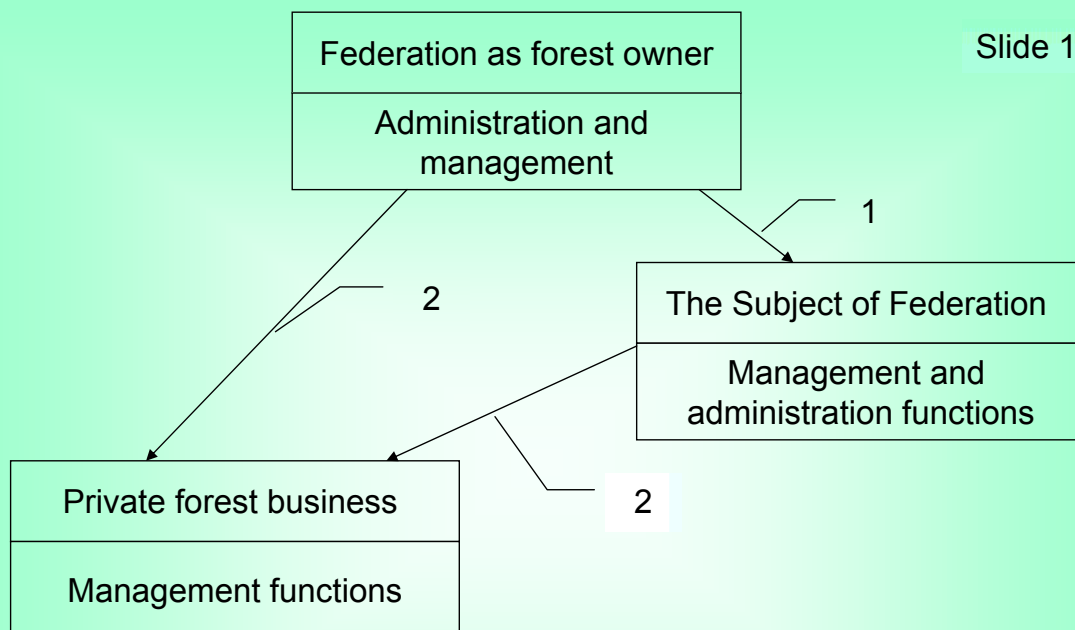
Development of the federative relations in forest sector



The federative relations in forest sector, 2005-2006

1. Forest area is distributed between the Center and Regions.
2. The power to administrate forest is distributed between Center and Regions.
3. The power to administrate forest is delegated from the Center and Regions.

Approaches to establish federative relations in forest administration and management



1- agreement to delegate administration and management functions;
2- leasing agreement

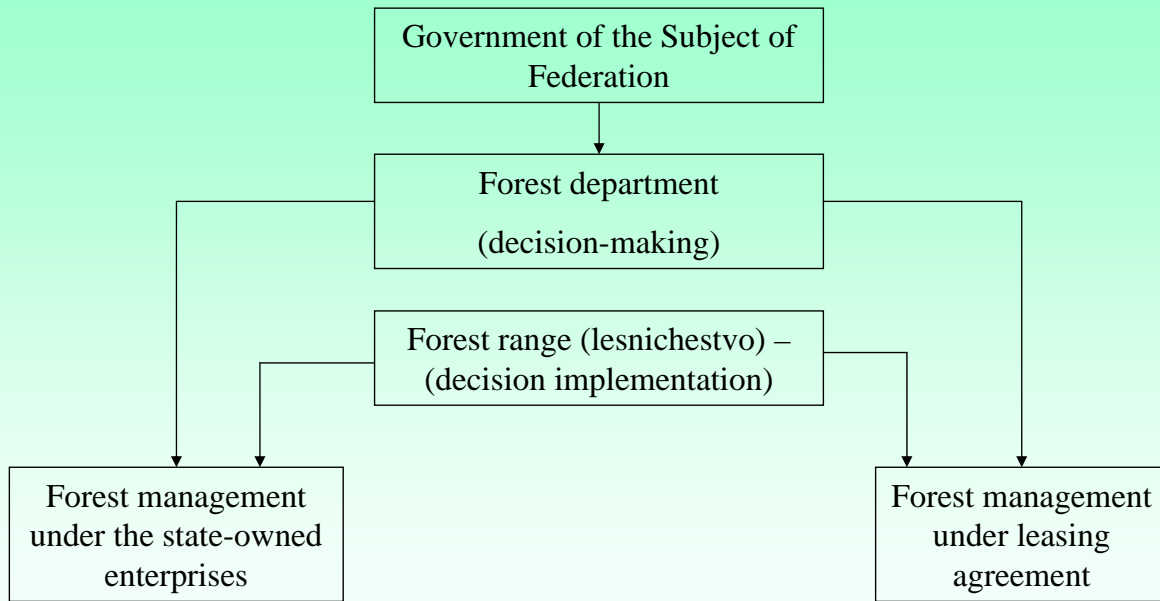
***New approach to establish power balance
in forest sector by Forest Code, 2006***

| The rights to be delegated | The responsibilities to be delegated |
|---|--|
| <ol style="list-style-type: none"> 1. to grant forest plots for leasing (concession), 2. to organize the silvicultural operations by the private business, 3. to organize the silvicultural operations by the state commercial organizations | <ol style="list-style-type: none"> 1. to earn forest income in target figure, 2. to charge forest income to federal budget in target figure, 3. to report annually Federal Forestry Agency concerning forest income and silvicultural activity, 4. to report periodically Federal Forestry agency concerning forest fund content |

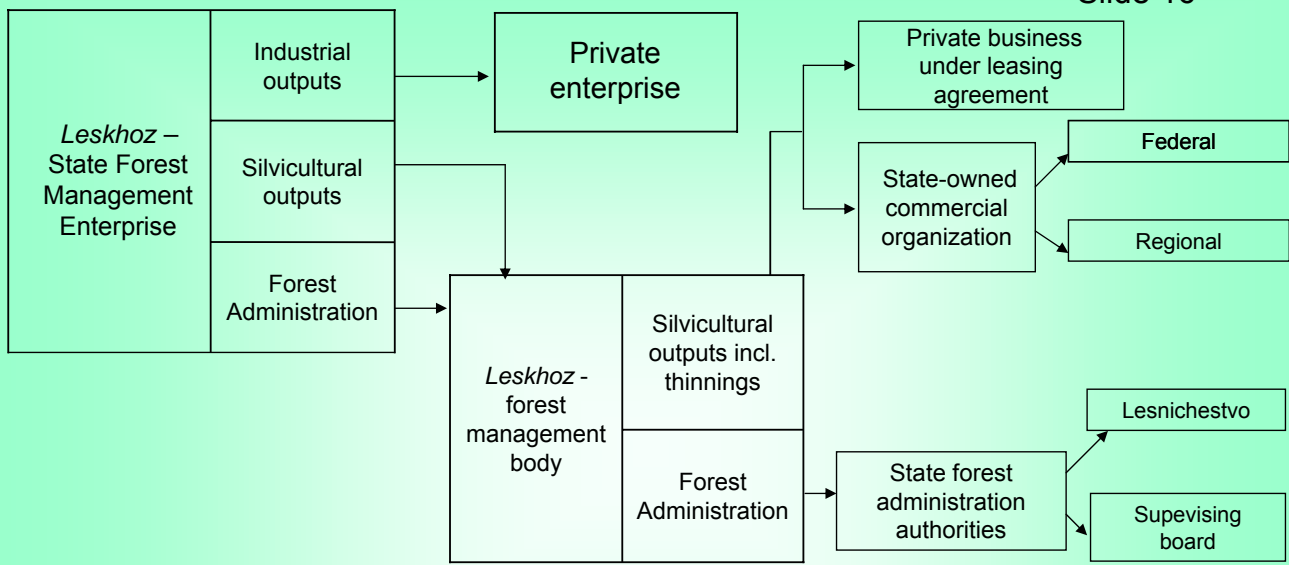
The rights and responsibilities of regions according to agreement



Federal authorities to administrate forest



Authorities of the Subject of Federation to administrate and manage forest



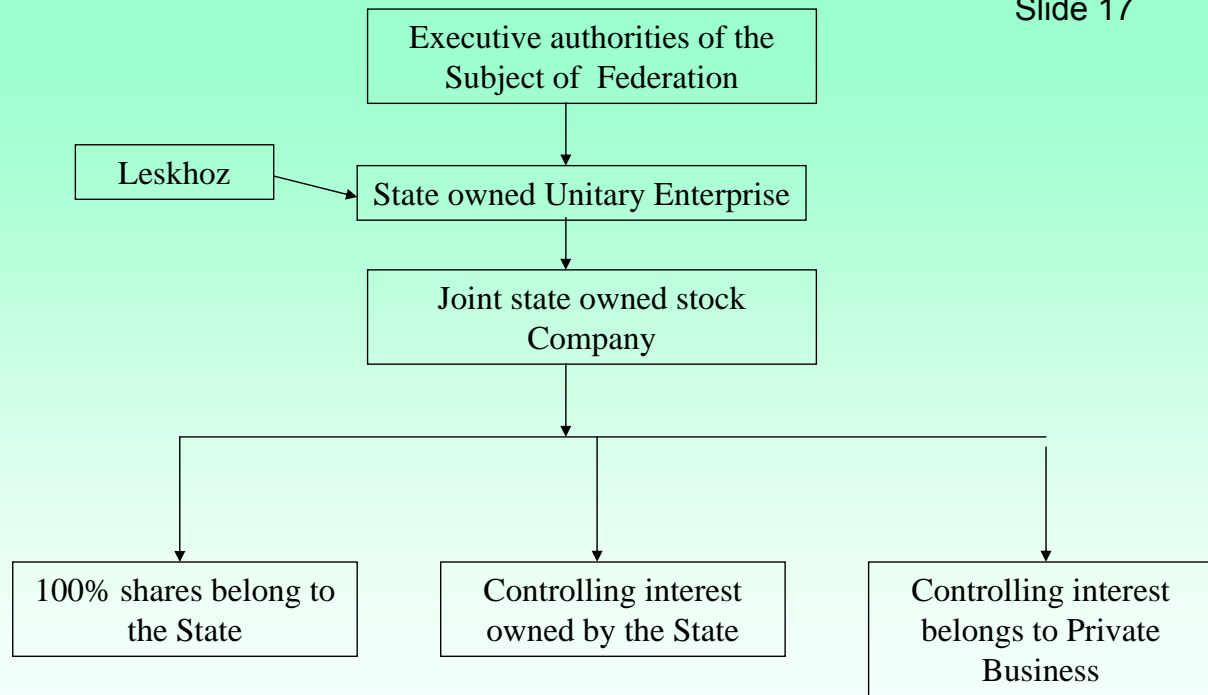
Stage 1 1930s-1993

Stage 2 - present time

Stage 3 - 2008

(past time)

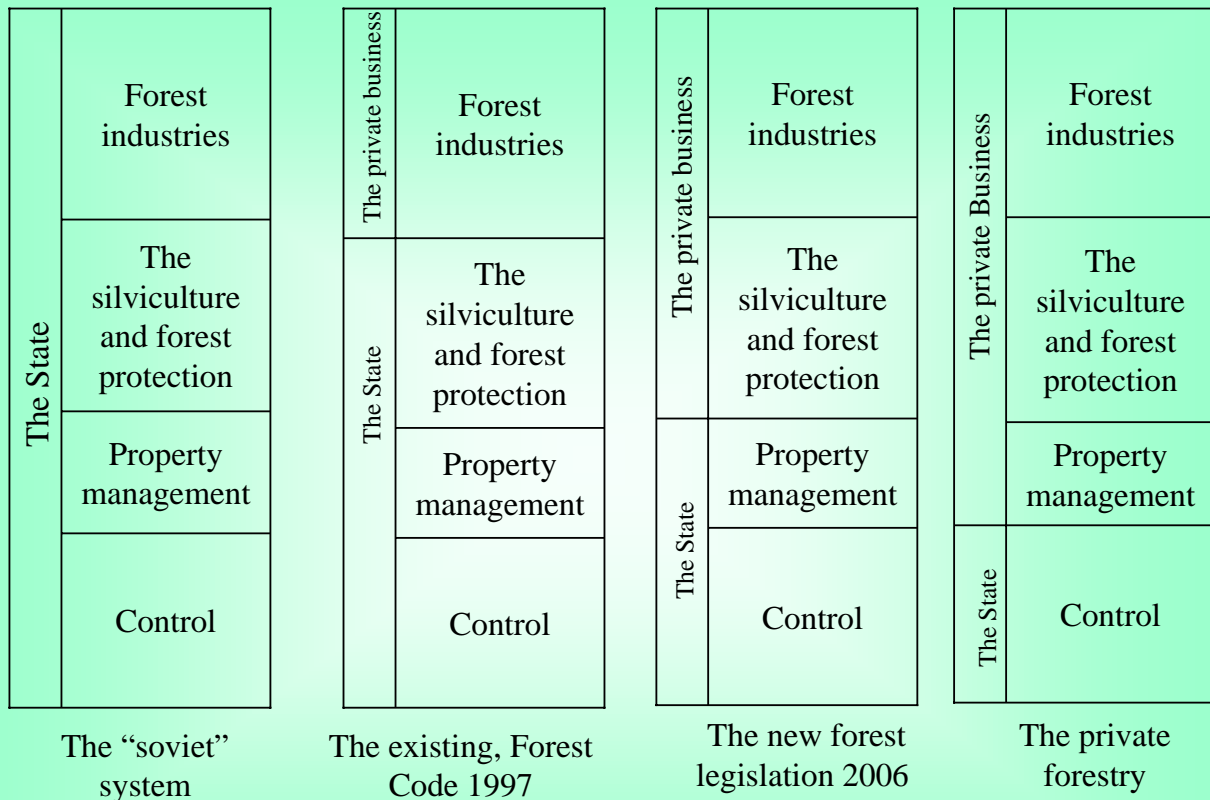
Forest administration and management development in Russia (on low level)



The steps to establish the State-owned forest Enterprise

1. Forest plan of the Subject of Federation (article 86)
2. Silvicultural regulations (article 87)
3. Plan of forest exploitation (article 88)
4. Public examination of forest exploitation plan (article 89)
5. Public forest inventory (article 90)
6. Public forest register (article 91)
7. Public cadastr of forest plots (article 92)
8. Public registration of forest plots transactions (article 93)

Legal instruments to administrate forest land



The development of relations between the State and Business

1. Lease agreement

The territorial forest agency as a forest owner is obliged to allocate tracts of forest resource to forest users (leaseholders) for periods from one year to forty nine years. Such forest tracts may be used for a single purpose or for many purposes.

2. Agreements, granting tracts of forest resource on a free-of-charge basis.
3. Concession agreements are needed to allocate forest tracts in inaccessible areas with poor or no infrastructure (now they are not used).
4. Timber auction agreements are meant for forest resource allocation for a short period (less than one year).

The system of timber allocation in Russia in accordance with Forest Code, 1997

| The forms of logging organization | Share, % |
|---|----------|
| 1. Long-term agreement (leasing) | 50 |
| 2. Short-term agreement (auction) | 15 |
| 3. Agreement to cut forest free of charge | - |
| 4. Concession agreement | - |
| 5. Direct distribution by state authorities | 35 |
| Total | 100 |

70% of leasing agreements is under 5 years period.

Logging organization in Russian Federation, 2005

1. Leasing agreements with rights to cut wood and responsibility to manage forest land
Period: 10-49 years;
2. Cutting agreements with rights only to log trees.
Period: less than 1 years

The forest harvesting in accordance with Forest Code, 2006

1. Forest plot is recognized by Civil Code as land plot (article 7)
2. Leasing agreements and cutting agreements are regulated by the Civil Code (article 71)
3. The cutting permits are replaced by forest declarations (article 26)
4. The forest plot is to be estimated by cadastral plan (article 79)
5. The leasing rights are to be registered by public authorities (article 93)

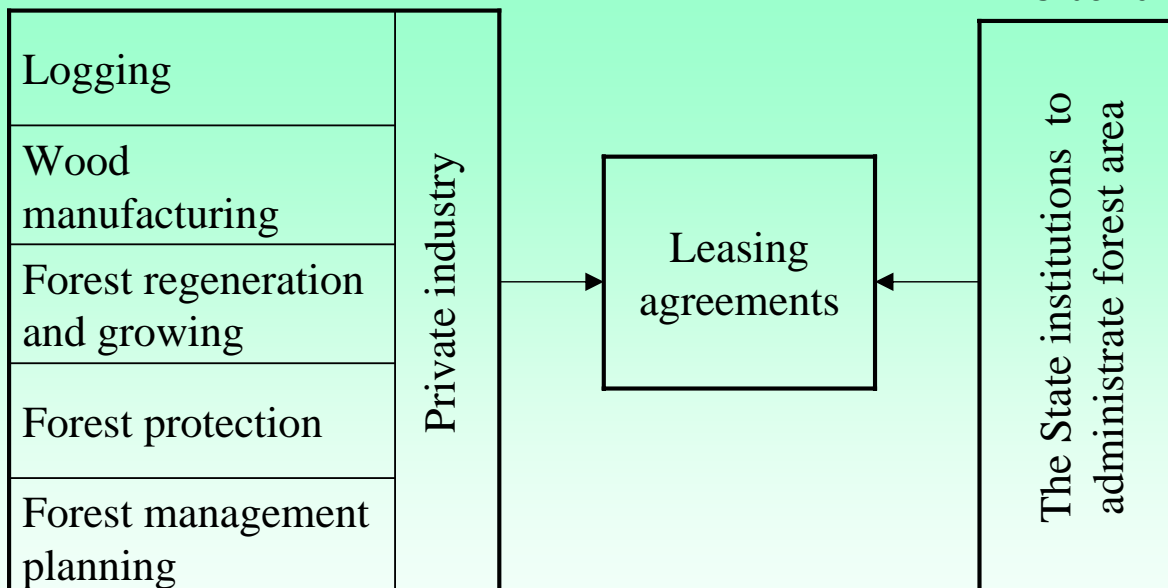
The legal instruments to develop forest leasing

1. to win cutting rights in auction in accordance with Forest Code regulations.
2. to get access to forest plot on base of priority investment plan (article 74)

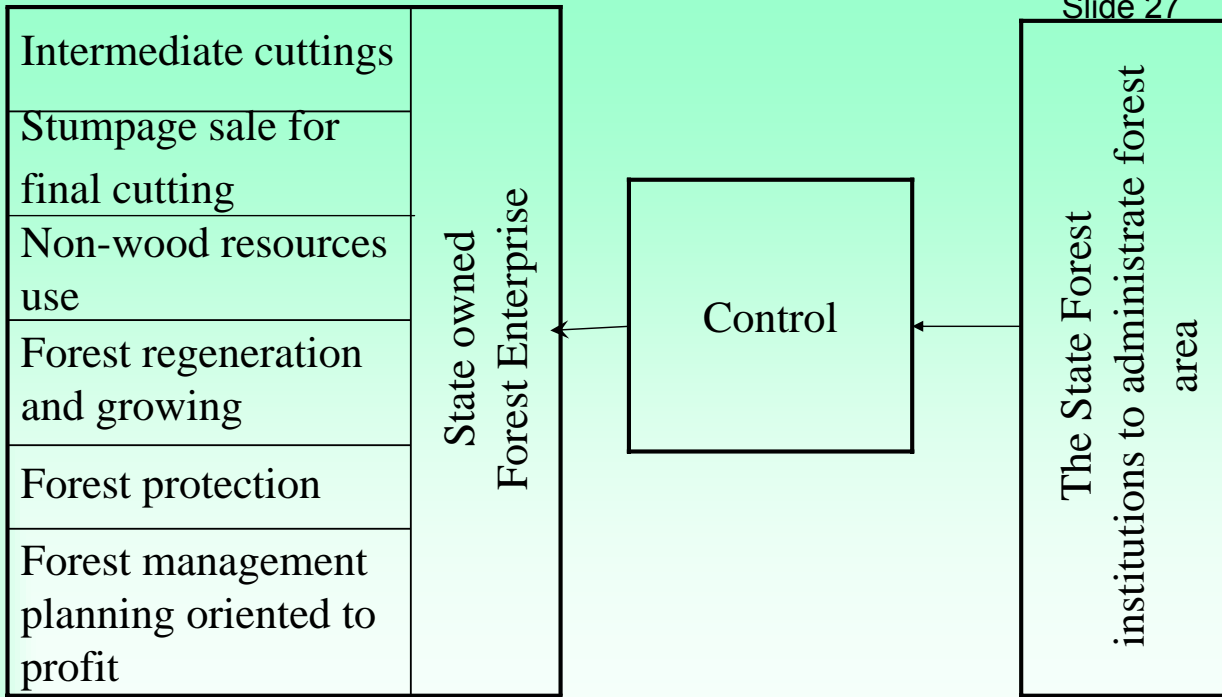
How to get cutting rights in accordance with Forest Code

1. Public announcement about forest harvesting auctions (article 79)
2. Forest user application in accordance with legal regulations (article 79)
3. Forest user participation in bidding process
4. Winning of cutting rights offering higher price
5. Leasing agreement is signed
6. Forest user is responsible to work out plan of forest exploitation
7. Plan of forest exploitation is to be examined by the regional authorities
8. Annual forest declaration is to be presented to regional forest authorities

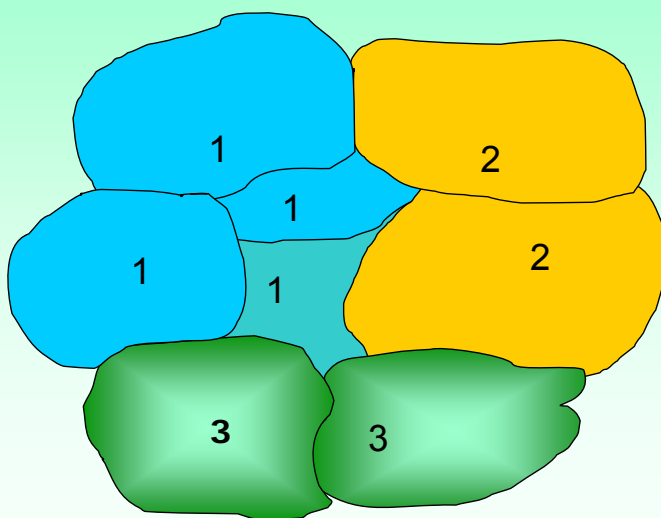
The procedures to get access to forest under leasing agreement



The regions rich in forest: how to administrate and manage forest?

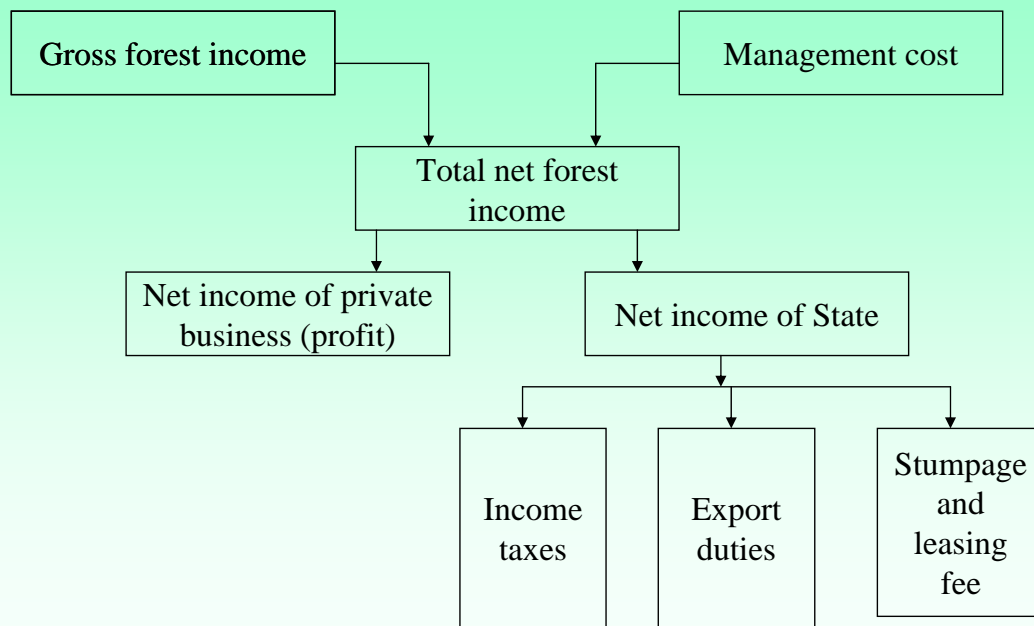


The regions scarce in forest: how to administrate and manage forest?



- 1 – forest area under the private business management
- 2 – forest area under the State owned business management
- 3 – reserved forest area and specially protected area

The Regional Forest Management Plan as a main instrument to balance power and interests in forest sector



Indicators to estimate forest usage by private business

1. Total net forest income per m³ of harvested wood
2. Total net forest income per ha of forest area
3. Net forest income belonged to the State per m³ of harvested wood
4. Net forest income belonged to the State per ha of forest area
5. Ratio of stumpage fee to the forest management cost
6. Ratio of cost to administrate forest to net forest income belonged to the State

Indicators to estimate forest management under private business

1. Gross forest income earned by the state owned commercial enterprises per ha of forest area
2. Forest management cost per ha of forest area
3. Ratio of gross forest income to management cost
4. Ratio of cost to administrate forest to gross forest income

Indicators to estimate forest management under state owned commercial enterprises

Stumpage fee in the Russian Federation (ruble per m³)

| | Including | | |
|------|---------------|-------------|--|
| | Auction price | Leasing fee | Minimum fee approved by the Federation |
| 1998 | 19.8 | 6.5 | 5.0 |
| 1999 | 38.9 | 11.3 | 7.8 |
| 2000 | 59.4 | 16.4 | 10.6 |
| 2001 | 77.7 | 21.7 | 16.3 |
| 2002 | 64.4 | 23.7 | 19.5 |
| 2003 | 62.2 | 23.2 | 17.3 |
| 2005 | 70.8 | 29.1 | 22.3 |

Average stumpage price in 2005 – 47 rubles

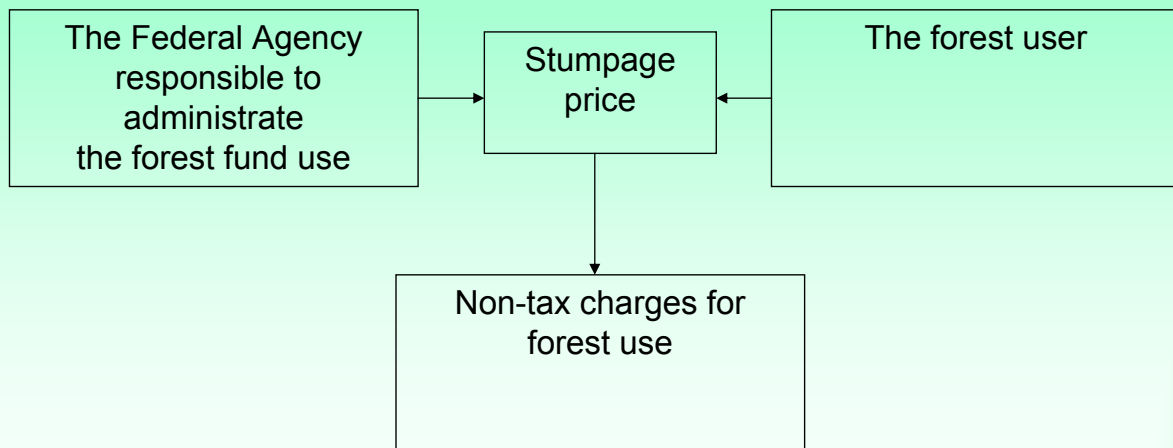
| Elements of fee | Share, % |
|--------------------------------------|-------------|
| 1. Federal tax (minimum rate of fee) | 78 |
| 2. Regional tax | 5 |
| 3. Market surplus due to auction | 17 |
| Total | 100 |

Average cutting fee in 2004 – 43.00 rubles

Structure of cutting fee in Russian Federation, 2004

The structure of forest administration and management cost by their sources (%)

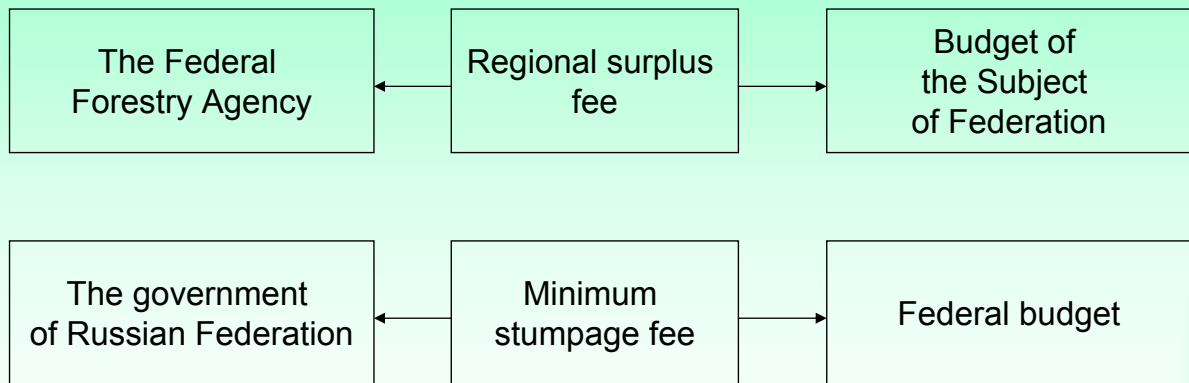
| | Federal budget | Regional budget | Non-budget assets earned by leskhozses |
|------|----------------|-----------------|--|
| 1998 | 38.5 | 10.6 | 50.9 |
| 1999 | 29.7 | 9.6 | 60.7 |
| 2000 | 27.3 | 8.1 | 64.5 |
| 2001 | 25.4 | 10.1 | 64.5 |
| 2002 | 37.3 | 8.2 | 54.5 |
| 2003 | 34.4 | 8.7 | 56.9 |
| 2005 | 33.0 | - | 67.0 |



The system of relations between the State and Private Business under the non-tax charges for forest use, 2005-2006

Administering of charges for forest use represents the system of the forest owner actions directed to

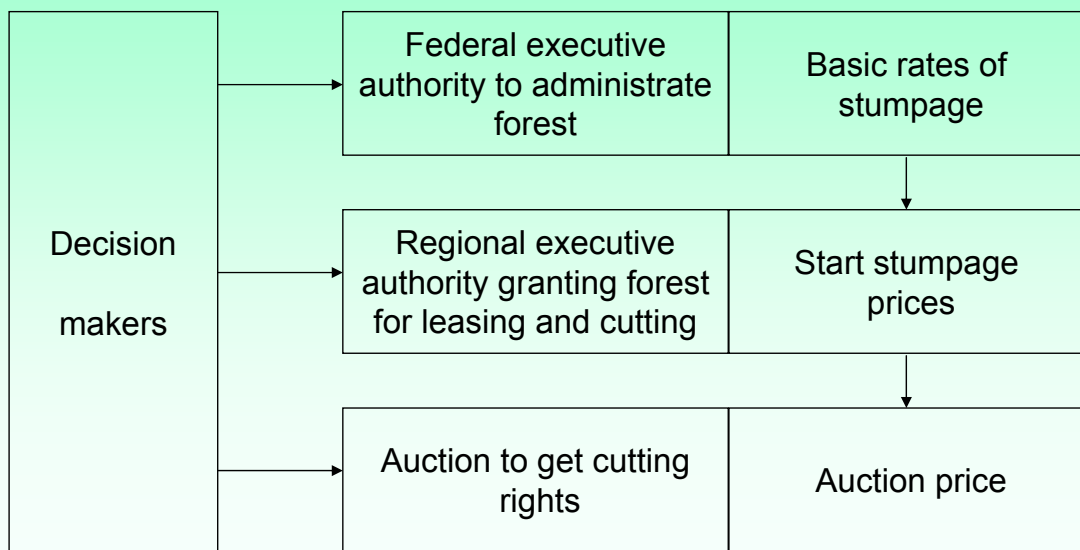
- Collect and analyze the forest inventory and commercial information (cost and revenues in forest sector),
- Calculate the basic rates of charge for forest use,
- Collect the charges from forest users,
- Assess the charges upon the budgets

Who establishes?Who uses?

The system of stumpage pricing under administering of charges for forest use, 2005-2006

Administering of Charges for Forest use requires:

1. To establish the special institutions under the Federal Forestry Agency to administrate the forest charges,
2. To approve the Methods to calculate forest charges by the Government,
3. To approve the Methods to calculate prices for completed forest management operations by Federal Forestry Agency,
4. To approve the standards of logging cost under leasing (concession) system,
5. To establish the permanent negotiations process between the state authorities and forest business at regional level,
6. To approve the basic rates of charges by the Federal Forestry Agency,
7. To approve the normative cost to reproduce forest by the Government



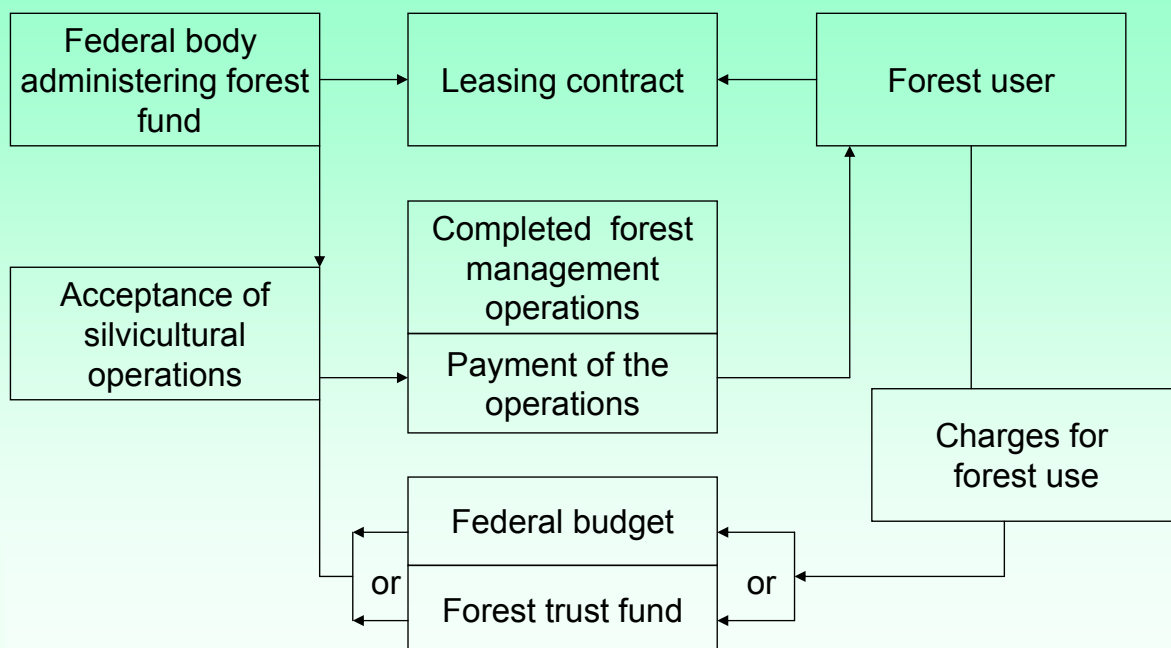
System of stumpage prices under forest management decentralization

There are two approaches to finance the completed forest management operations under the leasing system

1. Payment for completed forest management operations from budget or special trust fund. The silvicultural operations are carried out by forest users and paid by the bodies administering forest fund,
2. Forest management operations cost are included to the direct cost of forest users.

Why it is impossible to include the forest management cost to the direct cost of forest users

1. Forest management cost as an element of direct logging cost means the double assessment by charges
2. Unequal access to forest resources for logging companies under:
 - a. Leasing contracts without responsibility to manage forest (management cost are absent),
 - b. Leasing contracts with responsibility to manage forest (management cost increase the total cost),
3. It will be impossible to control the silvicultural operations without financial flows regulating.



Payment for completed forest management operations under long-term leasing contracts

| Indicator | Roundwood exports | Domestic Market |
|---|-------------------|-----------------|
| 1. Free to the boarder (Finland) | 30.0 | - |
| 2. Free to the customer | - | 20 |
| 3. Rail way tariff | 12.0* | 4.0** |
| 4. Loggers' profits, including taxes and stock accumulation | 4.0 | 4.0 |
| 5. Prime cost of forest logging - free to low landing | 8.0 | 8.0 |
| 6. Forest rent revenue (Stumpage price) | 6.0 | 4.0 |

*The tariffs have been raised thrice as higher.

**To distances up to 1,200 km.

Forest Rent Revenue (Forest Resource Charges) in US\$/m³

Stumpage System Details

Applies to Period 3 - from July 1 to July 28, 1995



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Natural Resources

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Stumpage Matrix

| Per m3 | Pulp | Veneer/ply | Sawmill | Composite | Paper | Fuelwd | nes |
|---|--------------|--------------|--------------|-------------|--------------|--------------|--------------|
| <i>Pr/Pw</i> minimum stumpage forest renewal charge assigned | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| rate in lieu of RV stumpage from residual calculated | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| stumpage | | | | | | | 6.9 |
| | 17.5 | 1.44 | 1.44 | 4.25 | 10.01 | | |
| | 29.75 | 13.69 | 13.69 | 16.5 | 22.26 | 12.25 | 19.15 |
| Conifer minimum stumpage forest renewal charge assigned | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| rate in lieu of RV stumpage from residual calculated | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| stumpage | | | | | | | 6.3 |
| | 17.5 | | | 4.25 | 10.01 | | |
| | 24.75 | 7.25 | 7.25 | 11.5 | 17.26 | 7.25 | 13.6 |
| <i>Po/Bw</i> minimum stumpage forest renewal charge assigned | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| rate in lieu of RV stumpage from residual calculated | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| stumpage | | | | | | | 8.5 |
| | 17.5 | 8.33 | 2.66 | 4.25 | 10.01 | | |
| | 19.25 | 10.08 | 4.41 | 6.00 | 11.76 | 1.75 | 10.3 |
| <i>Hwd G1</i> minimum stumpage forest renewal charge assigned | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| rate in lieu of RV stumpage from residual calculated | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 |
| stumpage | | 12.0 | | | | | 9.6 |
| | 17.5 | | 4.43 | 4.25 | 10.01 | | |
| | 26.75 | 21.25 | 13.68 | 13.5 | 19.26 | 9.25 | 18.85 |
| <i>Hwd G2</i> minimum stumpage forest renewal charge assigned | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| rate in lieu of RV stumpage from residual calculated | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| stumpage | | 2.0 | | 2.0 | | | 2.1 |
| | 4.38 | | | | 2.5 | | |
| | 7.13 | 4.75 | 2.75 | 4.75 | 5.25 | 2.75 | 4.95 |

Reference Prices

| | | |
|-----------------|-----------|---|
| Exchange Rate | 1.3764 | Bank of Canada. Wednesday noon average |
| Pulp | \$ 910.00 | Pulp & Paper week, bleached softwood Kraft in SUS. June average |
| Veneer/ply | \$ 82.81 | from sector. Po/Bw in \$Cdn. for the month of June |
| Sawmill Pr/Pw | \$ 507.50 | Random Lengths. Eastern Pw 1x6 Std KD in SUS |
| Sawmill conifer | \$ 279.75 | Random Lengths. Chicago SPF 2x4 Std fc Btr in SUS |
| Sawmill Po/Bw | \$ 253.21 | Northern Hwds. Aspen 68.5%+ Birch 31.5%. FOB mill. \$US. 27/05/95 to 17/06/95 |
| Sawmill HwdG1 | \$ 410.69 | Northern Hwds. Mh 77%+Be 15%+Birch 8%. FOB mill. \$US. 27/05/95 to 17/06/95 |
| Composite | \$ 188.25 | Random Lengths. 7/16 inch North Central in SUS |
| Paper | \$ 680.00 | Pulp & Paper week. 30 lb. newsprint in SUS. June average |