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Russian Forestry Planning: Forestry Revenue and Expenditures

To cite this article: N Pryadilina 2019 *IOP Conf. Ser.: Earth Environ. Sci.* **316** 012054

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Russian Forestry Planning: Forestry Revenue and Expenditures

N Pryadilina

Department of Economics and Economic Security, Ural State Forest Engineering University, 37 Siberian tract, Ekaterinburg 620100, Russian Federation

Corresponding email: lotos_nk@inbox.ru

Abstract. The expenditure-revenue comparison of forestry in market conditions is becoming a pressing issue. For the government, expenditures are tied to forest management costs, and revenue is generated in the form of payments for forest use. At the same time, the target of budget forestry funding is parcels of forest reserve land that are not leased. Forest management within the borders of leased forest lands is carried out by the tenants at their own expense, while continuing to make lease payments. As studies have shown, expenditures for all budget levels of forestry management in the Russian Federation from 2011 to 2017 consistently exceeded revenue from forest use. One of the key problems in Russian forestry is underfunding. Given these conditions, this industry's existing systems of budgeting and revenue increases must be transformed. This paper offers recommendations on how to change the current situation.

1. Introduction

Works of both foreign specialists [1, 2] and leading Russian scientists linked to the forestry sector [3-5] address the issues of increasing revenue from forest management.

The Russian Federation has the largest forest area in the world and is second only to Brazil in timber reserves. Russia's forest area is 1,184 million hectares. Its total timber reserves equal 83.4 billion m³. Mature and over-mature stands of the major forest-forming species in Russia's commercial forests occupy 29 billion m³. The size of Russia's annual cut is 729.6 million m³.

Nonetheless, the current potential of Russian forests as a source of revenue goes virtually unused. In today's situation, expenditures of forest management and administration in this field exceed the sector's earning capability. Forestry in Russia, unlike in most other "high forest cover countries" of the world, is unprofitable. It is dominated by the principles of planning and distribution system and using budget funding for commercial expenses to regenerate forest resources, which is carried out with residual funding and in the absence of an economically justified standard expense allowance for forestry activities and practices.

2. Methods and Materials

2.1. Revenue from Forestry

According to the Forestry Code [6], forest use in the Russian Federation is subject to charge (article 94). Payment for forest use is one of the sources of revenue collection for both the federal budget and the budgets of Russian Federation (RF) constituent entities. Most revenue (up to 85%) comes from the



use of the forest leased under forest leasing agreements. Regardless, timber harvesting still brings the greatest amount of revenue.

Payment receipts for forest use in the Russian Federation for the period from 2008 to 2017 are presented in Table 1.

Table 1. Actual payments received for forest use in the Russian Federation, (bil. rubles)^a.

Item	Years											2017/ 2008 %
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
Total actual payments received from forest use	18.5	16.5	20.0	21.6	22.6	23.2	25.4	26.5	29.5	33.4	180.5	
Including the federal budget	11.8	12.1	14.8	16.4	17.0	17.5	19.1	19.6	20.7	22.7	192.3	
Including the budgets of Russian Federation constituent entities	6.7	4.4	5.2	5.2	5.6	5.7	6.3	6.9	8.8	10.7	159.7	

^aData from the Russian Federal Forestry Agency.

Over the course of the ten years analyzed, profitability of the forest sector increased 1.8 times. Federal budget revenue grew by 92.3% or 10.9 billion rubles, and the budget revenue for constituent entities grew by 59.9% or 4.0 billion rubles.

The Decree of the Government of the Russian Federation dated May 22, 2007 No. 310 [7] is the core document that prescribes the procedure for determining the minimum forest use rates. These rates have no economic justification and replicate the stumpage sale pricing lists used in the Soviet economy for selling standing timber. Only belt zoning has been replaced by forest-tax zoning, and the presented rates correspond to the current pricing scale for timber products.

Table 2 shows the average cost and the average minimum rate per unit of forest resources in the Russian Federation.

Table 2. Average cost and average minimum rate per unit of forest resources in the Russian Federation from 2008 to 2017^a.

Item	Years											2017/ 2008 %
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
Average cost for 1 m ³ of timber	61.2	52.6	49.8	48.3	47.4	46.2	48.5	52.6	59.1	69.9	114.2	
Average minimum rate per 1 m ³ timber	35.5	35.8	34.9	33.3	32.3	31.3	32.5	34.6	36.5	39.0	109.8	

^aData from the Russian Federal Forestry Agency.

As seen in Table 2, rates for a unit of forest resources tended to decrease from 2009 to 2015 and, in 2017, were quite similar to rates from decades ago. This has resulted in forest revenue that cannot cover the cost of regenerating forest resources being used.

The Decree of the Government of the Russian Federation, which set out a gradual – over the course of three years – indexation of rates from 2018 to 2020, is not significantly improving the current situation [8]. In successful forest countries, such as Finland, Canada, or the United States, the market

price on standing timber is one or two orders of magnitude higher. It not only covers the costs of forestry, but also provides significant revenue.

Due to low competition when transferring forest lands for leasing and poorly organized auctions in the Russian Federation's constituent entities, the leasing rates are set at a starting rent level – a starting price – in a high percentage of cases. Furthermore, in more than half of the cases, only one participant takes part in the auction, closing the agreement at a minimal price. As a result, the country's forest resources are transferred for use at minimum prices. The state and, particularly, regional budgets, incur significant financial losses. In fact, many of the most economically accessible forest lands are being used by resellers who practice the basic resale of standing timber. The average sale price of standing timber by these “pseudo-tenants” is about 500 rubles per 1 m³.

The existing organization of forest use on the basis of auctions has shown its ineffectiveness in creating a competitive environment and, thus, making the forest sector a highly profitable industry [9].

Another unresolved issue in forestry is outstanding payments for forest use in the budget system. Compared to 2016, Rosleskhoz's (the Russian Federal Forestry Agency) arrears on payment for forest use decreased by 6.8% and amounted to 9.7 billion rubles as of January 1, 2018.

2.2. Expenditures on Forestry

Resource provision of forestry development practices occurs as part of the Russian Federation government program “Forestry Development” for 2013-2020 [10], as well as the range of state programs in the forestry sector (or “forest” subprograms of regional government natural resource programs).

Funding amounts for forestry development activities from 2008 to 2017 are displayed in Table 3.

Table 3. Forestry development practice funding in the Russian Federation, (bil. rubles)^a.

Item	Years										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2017/ 2008 %
Total forestry funding	20.7	21.2	19.7	29.2	31.0	42.6	44.3	40.6	38.7	40.4	195.1
Including funds from the federal budget	17.1	17.6	15.0	21.3	20.2	29.6	31.9	29.6	26.8	27.9	163.1
Including funds from Russian Federation constituent entities	3.6	3.6	4.7	7.9	10.8	13.0	12.4	11.0	11.9	12.5	347.2

^a Data from the Federal Forestry Agency.

Over the course of the ten years analyzed, forestry expenditures increased 1.9 times. Federal budget expenditures grew by 63.1% or 10.8 billion rubles, and those of constituent entity budgets grew 3.4 times or 8.9 billion rubles.

As a result of analyzing the data from Table 3, federal budget funds for forestry were reduced in 2015 and 2016, which ultimately affected the quality and completeness of enforcing delegated authority by Russian Federation constituent entities.

According to data from the Federal Forestry Agency, federal budget revenue from payments for forest use in 2017 amounted to 22.7 billion rubles, with federal budget expenditures coming to 27.9 billion rubles, including subsidies granted to constituent entities equaling 22.4 billion rubles. The regions allocate most of the money – 12.2 billion rubles – for wages and other expenses to maintain forest management authorities. The remaining funds are 4.3 billion rubles for forest fire prevention and suppression; 2.2 billion rubles for regenerating forests; 1.5 billion rubles for forest management and forest land planning; and 400 million rubles for protecting forests from pests, disease, etc.

During 2017, Russian Federal Forestry Agency conducted expenditure execution erratically: 19% in the first quarter of 2017, 46% in the second quarter, 73% in the third quarter, and 99.7% in the fourth quarter, cumulatively.

The subsidy amounts from the federal budget given to exercise authority in forestry affairs for the period from 2011 to 2017 are presented in Figure 1.

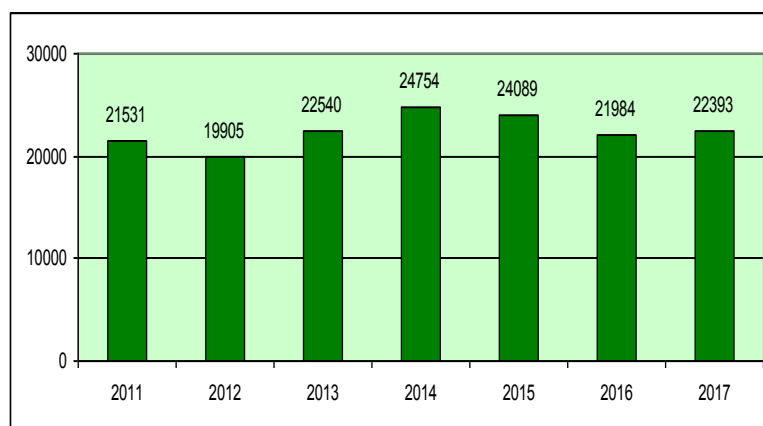


Figure 1. Subsidy dynamics from 2011 to 2017, provided from the federal budgets to Russian Federation constituent entities to exercise authority in forestry affairs, (mil. rubles).

The smallest subsidy was recorded in 2012 and the largest in 2014. Yet, there is a devastating shortage of allocated funds. Russia spends 140 times less per forest hectare than the USA and 19 times less than Finland.

The structure of forestry funding sources in the Russian Federation in 2017 was: 4% for forest management; 6% for forest protection; 1% for withdrawal and valuation of timber cutting areas; 9% for forest regeneration and cultivation; 23% for forest fire protection; and 57% toward enforcing government functions in forestry affairs. Figure 2 shows the structure of forestry funding sources in the Russian Federation in 2017.

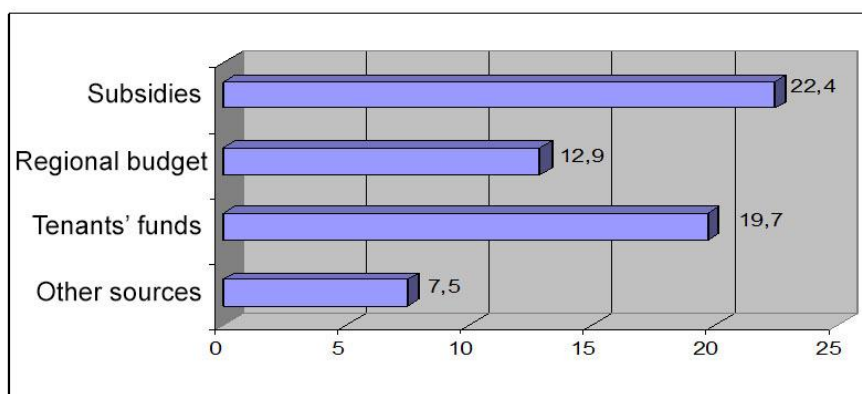


Figure 2. Structure of forestry funding sources in the Russian Federation in 2017, (bil. rubles).

According to forestry funding structure in 2017 shown in Figure 2, most of it consisted of subsidies (35.8%). However, the share from tenant funds was significant (31.5%) and co-financing by tenants for preserving, protecting and regenerating forests in 2017 amounted to more than 19.7 billion rubles.

3. Results and Discussion

If we compare budget expenditures on forestry to the revenue from forest use for the period from 2008 to 2017, the economic impact is negative (the general exception that confirms the rule is in 2010, and in 2008 and 2009 in terms of constituent entities' budgets).

The ratio of forestry funding (expenditures) to payments for forest use (revenue) from 2008 to 2017 in the Russian Federation is presented in Table 4.

Table 4 Budget expense reimbursement for forestry funding via forest use payments in the Russian Federation from 2008 to 2017, (%).

Item	Years										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Total budget expense reimbursement for forestry funding	89.2	77.7	101.4	74.1	72.8	54.5	57.3	65.2	76.2	82.6	
Including the federal budget	69.0	68.7	98.6	76.9	84.1	59.1	59.8	66.2	77.2	81.3	
Including the budgets of Russian Federation constituent entities	186.1	122.2	110.6	65.8	51.8	43.8	50.8	62.7	73.9	85.6	

As Table 4 shows, the ratio between federal budget revenue and forestry expenditures from 2011 to 2017 does not favor the revenue side. Federal budget forestry revenue in 2017 covered 81.3% of the federal budget expenditures allocated to forestry. According to data from Russian Federal State Statistics Service for 2017, the contribution from forestry toward the GDP amounted to 130.4 billion rubles at current prices, which makes up only 0.14% of the Russian Federation's GDP.

The main reasons for the forestry sector's negative balance are low payments from forest use, the absence of commensurate costs and results from forestry activities, underdevelopment of the regional regulatory framework, prohibition of government organizations to engage in commercial activities (before the new Forestry Code was introduced, revenues from forestry organizations' own economic activities covered 80-90% but are now practically deprived of this opportunity), the ineffectiveness of the existing auction-based forestry organization, and the lack of a basic market economy concept for forest products. Most forestry expenditures in the Russian Federation are used to exercise state administration functions in forestry affairs, which leads to a real reduction in funding for forestry practices. In view of the forestry sector's low significance in the Russian Federation's economy, the number of subsidies to enforce authority in forest affairs in the event of a budget deficit is formed with residual funding. All the reasons stated above illustrate the shortcomings of the economic affairs in forestry.

The current payments system falls short of the economic reality and leads to an undervaluation of forest resources. Preserving the administrative institution of payment for standing timber in the Russian Federation grows increasingly more obsolete with every year. This institution reduces opportunities for a public-private partnership in terms of an ongoing dialogue between the state and businesses. An economic mechanism based on payments for using forest resources fails to fulfill its incentive functions but is only fiscal in nature due to its low prices, although they are periodically indexed. There is a need to transition from administrative pricing for standing timber to market pricing, in which the resource's market price will determine payment amounts. As the successful practices of foreign forest countries show, the net return from forest land should form the basis for market prices of standing timber in long-term forest use.

The Fundamentals of State Policy in Forest Use, Preservation, Protection and Regeneration in the Russian Federation until 2030 [11] and the Strategy for Developing the Forest Complex of the Russian Federation until 2030 [12] have established the need to implement a mechanism called "improving the payments system for forest use".

The existing system of forest revenue distribution between the federal budget and the budgets of Russian Federation constituent entities fails to stimulate the latter's effective execution of the authority in managing forest use.

In view of the aforesaid, key recommendations for improving the profitability of the forestry sector are:

- Study and implement the forest management practices of successful forest countries using funds from forest use;
- Receive recognition of the forest sector's significance from federal and regional authorities and include the forest sector (and forestry as an integral part of the forest sector) in the list of priority economic sectors in the Russian Federation;
- Create the conditions to transition forestry of Russian Federation constituent entities to an intensive model of forest use, regeneration, preservation and protection;
- Transition to competitive forest use access;
- Substantially improve the established system of state forest management to reduce the cost of maintaining bureaucracy;
- Draft and implement basic federal standard costs for preserving, protecting and regenerating forests to create competent and effective plans for spending federal subsidies;
- In the future, develop and introduce proposals on the possibility of shifting forestry funding from government sector provisions to the production industry, secured by its own incomes;
- Develop and implement a new approach to the pricing system for forest resources that is based on the market value of round timber. This approach should account for the costs of preserving, protecting and regenerating forests, as well as mechanisms for establishing and recovering forest rent;
- Review the existing system of distributing forest revenue between the federal budget and the budgets of constituent entities. This system currently fails to fully stimulate the latter's effective execution of the authority in managing forest use;
- Develop and implement an effective mechanism to motivate the constituent entities and encourage economic responsibility in the use and regeneration of forests generated by government authorities of these entities in the Russian Federation's budget system.

4. Conclusion

In summary, the forestry sector in the Russian Federation is almost completely budget-oriented and lacks the concept of a market economy. The roots of the issues in Russian forestry run deep. Major changes in effective forest management are necessary to resolve these issues. The recommendations proposed in this publication are aimed at increasing the profitability of forestry.

For the Russian Federation, the transition from administrative management to an economic relationship in forest management to a market relationship will require a number of political, legislative and managerial decisions. First and foremost, there must be the realization that maintaining the existing system of establishing, collecting and distributing the payments for forest resources, particularly standing timber, is impossible.

Replacing the current administrative forest management system with a market one cannot be implemented through any single legislative act within the Russian Federation's existing Forestry Code. A program for reforming economic relations, which should present specific stages, must be approved at the state level. It should culminate with the preparation of legislative acts and their adoption at the federal and regional levels. In this case, the situation could change and forestry will once again become a financially self-sufficient industry, as it was in pre-revolutionary Russia and the early years of Soviet power.

References

- [1] Linden, M and Leppanen, J., 2006 Public Cost-Sharing in Private Forest Investments in Finland, 1983–2000 *European Journal of Forest Research*. **125** 24
- [2] Uberhuaga P, Smith-Hall and Helles F, 2012 Forest Income and Dependency in Lowland

- Bolivia *Environment, Development and Sustainability*. **14** 23
- [3] Petrov A P 2016 *The Economic Relations in Forestry: From the Past to the Future* [in Russian] (Pushkino: All-Russian Institute of Continuous Education in Forestry) p 98
- [4] Moiseev N A *On Revenue and Expenditures in Forestry*. [in Russian] Forest newspaper from 23.07.2016, 54
- [5] Petrov, V 2016 *New Economic Policy in Russian Forestry* [in Russian] *LesPromInform* **7** (121)
- [6] The Forestry Code of the Russian Federation dated 04.12.2006 no.200-F3 [in Russian]
- [7] Decree of the Government of the Russian Federation dated 22.05.2007 no. 310. On Payment Rates per Unit of Forest Resources and per Unit Area of Federal Forest Land [in Russian]
- [8] Decree of the Government of the Russian Federation dated 11.11.2017 no. 1363. On Payment Rates per Unit of Forest Resources and per Unit Area of Federal Forest Land [in Russian]
- [9] Petrov A P and Pryadilina N K 2018 Forest Planning: A Conceptual Approach to Generating Forest Income Based on Market Prices for Wood *Russian Journal of Economics* **3** 35
- [10] Decree of the Government of the Russian Federation dated 15.04.2014 no.318 On the Approval of the State Program for Forestry Development in the Russian Federation for 2013-2020 [in Russian]
- [11] Decree of the Government of the Russian Federation dated 26.09.2013 Fundamentals of State Policy in the Use, Preservation and Regeneration of Forests of the Russian Federation until 2030 [in Russian]
- [12] Decree of the Government of the Russian Federation dated 20.09.2018 no. 1989-p *On the Approval of the Strategy for the Development of the Forestry Complex of the Russian Federation for the Period Until 2030*[in Russian]