Cadastral Challenges of Forest Resource Surveying in Belgorod Oblast

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Abstract. Private property as an institute first emerged in Russia in 1991. State Cadastre appeared as a result to keep land records. Russia’s policy today is to optimize the use and cost-effectiveness of natural resources. Cadastre is the main tool used to generate financial income. The more data is available in the Cadastre, the more profits can be made. The Russian Federation has the world’s largest forest resources. Forested lands account for 70% of Russian land; however, only 20% of the forests is recorded in the State Forest Register, while the rest is still not recorded in the Cadastre. Forest records are kept in the State Forest Register or in the State Cadastre; this duality entails greater costs for those who order and those who perform cadastral surveying. Since forest management does not use the coordinates used by the SFR, recording data on such forest plots is difficult. Forest surveying does not need to be approved by stakeholders, and neither do the boundaries defined by such surveying, as the boundary points are not landmarked.

1. Introduction

The Russian Federation has the world’s largest forest resources. Forested lands account for 70% of Russian land; however, only 20% of the woodland is recorded in the State Forest Register, while the rest is still not recorded in the Cadastre [1].

Today’s civil and land codes set forth that any real property is subject to registration in the State Cadastre; rights of property to any land plot in any category have to be registered with the state [2, 3].

2. Research essentials

Russian forest surveying is carried out within forestry boundaries; surveyed land is subject to registration in the State Cadastre, which is problematic.

The Federal Law passed on July 21, 2017 On Amendments to Certain Acts of the Russian Federation to Eliminate Contradictions in State Register Data and to Categorize Land Plots (Bill #90991-7), also referred to as the Forest Amnesty Act, introduces a mechanism that handles contradictions in the Uniform State Register of Real Estate (EGRN) pertaining to land plot categorization [4]. The authors of the bill believe it can help eliminate the contradictions between the State Forest Register and the State Cadastre, to help bring the State Forest Register entries on forests and their boundaries as well as on other lands that contain forests in line with the entries on settlement boundaries as recorded in the State Cadastre. Thanks to the Forest Amnesty, one can file a claim with a court if the cadastral layout of a land plot is not approved. Pursuant to FZ 280 Art. 3, approval of the cadastral layout cannot be denied in cases the boundaries of a newly formed land plot overlap with, or...
are entirely within, the boundaries of a forest plot, a forestry, or a park registered in the State Forest Register, provided that such land plot contains a real property the rights to which had been registered in the Unified State Register of Real Estate prior to January 1, 2016, and the use of the plot is not related to forestry.

Why such overlaps appear and why cadastral registration might be denied? There are several reasons:

- state forestry agencies have failed to (timely) provide State Forest Register data that must be added to the State Cadaster;
- when an overlap was found, the land surveyors failed to fill the Cadaster Specialist’s Conclusion section of the cadastral plan;
- when defining the boundaries, the land surveyors did not refer to any earlier rights of property nor to any land documentation stored in the State Land Arrangement Archives;
- a forest plot overlaps with municipal lands because the local self-government agency has illegally acquired the woodland and added it to their settlement when approving the new layout of the municipality;
- the State Cadaster lacks data on the area of each of the isolated plots comprising a single land property, which prevents proper plotting of forests;
- the forestry laws set forth a temporary use or lease of forest plots while such plots were not registered in the Cadaster prior to January 1, 2015;
- the Cadastral Agency yet needs to receive a single Certificate of Rights to Public Property, a document that used to be issued in 1992–1997.

Forest records are kept in the State Forest Register or in the State Cadaster; this duality entails greater costs for those who order and those who perform cadastral surveying. Customers have to pay for two registrations while surveying companies pay extra to land arrangement specialists or surveyors, who ultimately perform worse on a per-project basis. Extra business trips for approval add extra costs, etc. [5,6].

Since forest management does not use the coordinates used by the SFR, recording data on such forest plots is difficult. Pursuant to the Forest Code of Russia, forests are plotted in accordance with the region’s Forest Plan, Forestry Regulations, forest management documents, taxation summaries, and other documents. These documents might be drafted without reference to the Cadaster, without consulting the data on settlement or municipality boundaries. As a result, when the State Cadaster receives data on municipal boundaries, an earlier registered land plot classified as a forest resource turns out to be partly or fully within a settlement, within two or even more cadastral areas. Figure 1 is a chart of Belgorod Oblast’s forests.
According to state statistics, Belgorod Oblast has 2,713.4 thousand hectares of forest resources as of January 1, 2017. Statistics clearly shows how land categories changed in 2016 YoY, see Table 1 p7,8,9].

Table 1. Distribution of region’s land by categories, thousand ha.

| p/p | Land categories                                  | Years | 2016 | 2015 | 2016 change YoY |
|-----|-------------------------------------------------|-------|------|------|-----------------|
| 1   | Agricultural land                               |       | 2,094.8 | 2,095.4 | -0.6            |
| 2   | Settlement areas                                |       | 342.0   | 342.0  | -               |
| 3   | Industrial sites or otherwise specialized land  |       | 36.9    | 36.4   | 0.5             |
| 4   | Sanctuaries                                     |       | 2.5     | 2.4    | 0.1             |
| 5   | Forest resources                                |       | 227.7   | 227.7  | -               |
| 6   | Water bodies                                    |       | 2.2     | 2.2    | -               |
| 7   | Land reserves                                   |       | 7.3     | 7.3    | -               |
|     | TOTAL:                                          |       | 2,713.4 | 2,713.4 | -               |

As shown in Table 1, only agricultural land, industrial sites and other specialized land, as well as sanctuaries changed area-wise; other categories were not affected. Forests constitute 227.7 thousand hectares or 8.4% of Belgorod Oblast’s total area. This comprises: forested land (216.9 thousand hectares or 95.3%), non-forested land (2.3 thousand hectares or 1.0%), farmland (2.5 thousand hectares or 1.1%), as well as forests not included in forest resources, squares, streets, roads, wetland, water bodies, and other lands (6.0 thousand hectares or 2.6%). These resources do not include forested land that is classified under any other category [10,11,12].
The Government of Belgorod Oblast issued its Decree N 277-PP On the Work of Public Forest Inspectors in Belgorod Oblast dated August 10, 2015 [13,14] to protect forests and prevent violation of forestry laws.

This Decree sets forth the work to be done by Public Forest Inspectors [15]:

- assisting forestry officials and officers in forestry law enforcement;
- promotion of forest conservation in mass media, educating people to care about nature;
- prevention, identification, and suppression of any attempt to breach the existing forestry laws;
- educating people on environmental laws and forestry laws.

For detailed analysis, consider the forest resources Belgorod District has, see Figure 2.

![Figure 2. Map of Belgorod District: forested lands.](image)

Forests are expansive, and as a result of cadastral surveying, they now overlap with settlements and private land plots, see Figure 3. As seen in the map, some parts of the village of Boldyrevka are now within forest boundaries, which is a gross violation of rules.
Figure 3. Forest resources: Belgorod District, Boldyrevka:

sanctuary;
forest lands.

Another example is the village of Severny in Belgorod District, see Figure 4. As seen in the figure, earlier registered land plots also overlap with forest resources [16].

Figure 4. Forest resources in Belgorod District, Severny:
forest resources; cadastral block.
3. Conclusions
Thus, land surveying is a challenging endeavor. Forest surveying does not need to be approved by stakeholders, and neither do the boundaries defined by such surveying, as the boundary points are not landmarked.

Registering such land might be challenging, as a land plot classified as a forest resource is sometimes found to overlap with agricultural lands, settlements, or water bodies. This gives rise to many questions and errors, addressing which will take time.

Data on land plots, specifically their coordinates, maps, forestry data, etc. need to be updated to reduce financial losses and remove overlaps. Aerial photography is the most efficient and cost-effective remote sensing method in the age of IT. Cutting-edge technology and positioning systems facilitate photography mapping and makes surveying far easier. State-of-the-art software can process big data in no time. Such IT-focused approach to land plotting will help cut the costs and improve the quality of forestry-related documentation.

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