Factors and conditions for effective forestry in the context of the transition to sustainable development

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Abstract. The article is devoted to the issues of ensuring sustainable development of forestry. The work analyzes the functions performed by forests, as a result, it was concluded that sustainable development of forestry can be ensured through the balanced development of all functions of forests (economic, social, and environmental). The article highlights the main factors that ensure sustainable development of forestry (forest cover, form of forest ownership, forms of economic activity in forests). The analysis of the implementation of these factors in foreign countries (Belarus, Brazil, Germany, Canada, Finland) has been carried out, as a result, the most effective forms for implementation in Russian forestry have been proposed. In the conclusion, the main results of the work are presented, and conditions are proposed that allow organizing an effective sustainable forestry.

1. Introduction

Obviously, in the process of achieving sustainable development, forests play an important role in view of their planetary significance. The forest has global functions (forests have not only national, but also planetary significance) [1]. The forest is one of the most important carbon stores on the planet; it mitigates the effects of climate change by absorbing greenhouse gases, by creating more resilient landscapes [2]. Moreover, the economic and social importance of forests should not be underestimated: forests are housing, jobs and safety for the population, food, medicine, fuel, shelter, and income. With the world's population projected to reach 9.8 billion by 2050 and the share of urban population to reach 60 percent in 2030, global demand and consumption indicators related to forest products and services are expected will grow up. This will increase the pressure on forests and will inevitably create problems that will require urgent action at all levels to ensure non-depleting use of forests.

These problems are recognized by the world community, important documents have been adopted at the international level that form the basis for the protection, protection, and restoration of forests throughout the planet. In 1992, to preserve the multifaceted role and diverse functions of all types of forests, the UN program (program) of action adopted for sustainable development in the 21st century included the chapter “Combating deforestation”, the program areas of which included the goals: “increasing the efficiency of measures in sustainable forest management and taking effective measures to ensure the rational use and sustainable production of forest products and services” [3]. At the same time, in our opinion, when solving issues of sustainable forest management, reforestation, with international recognition of the ecological role of forests, the economic function of forests, which is no less important than ecological and social, has undeservedly gone to last place.
The purpose of the article is to study the role of forests in the process of sustainable development and develop proposals for achieving a new quality of forest management development (sustainable management), implying ensuring sustainable development of forestry with an optimal balance of all functions of forests.

2. Materials and methods
The study is based on the modern understanding of sustainable development as such a development in which the needs of the present must be satisfied, while the ability of future generations to meet their own needs is not compromised. The research used the following methods: comparative analysis, system analysis. We analyzed the sources of information: the legislation of foreign countries that establish the form of forest ownership and forms of economic activity in forests (Belarus, Brazil, Germany, Canada, Finland), reports of state bodies containing statistical data on the state of forests, FAO reports and reviews (Food and Agriculture Organization of the United Nations). Also, in order to develop theoretical provisions and practical recommendations for achieving a new quality of forest management development, scientific works in this area were studied concerning sustainable development issues, which influenced some of the research findings, for example, the question of the directions of sustainable forestry development in the Russian Federation [4], the question of the directions of forestry management in a market economy, which must meet the requirements of sustainable forest management [5-6]; on research in the direction of increasing the efficiency of the forest industry [7], on the relationship between the state and forest users on the issue of forest management and afforestation [8].

We also used tabular methods of presenting information.

3. Results
At present the contribution of the forestry complex to the Russian economy is significantly lower than the estimated potential and a similar indicator of other countries like Russia in terms of timber reserves and harvesting [9].

According to many researchers, one of the main problems of forestry in Russia is an extensive model of forestry based on harvesting ripe timber from predominantly natural forests, and solving this problem initially requires a change in the approach in the principle of forestry organization and forest management. The forestry industry in Russia is faced with the task of raising the productive forces, solving important state issues, first, the problem of improving the budget. At the same time, we categorically do not support the concept of traditional economic development, in which the core of such development is only economic growth [10], and we adhere to the rule that it is impossible to put the goal of “making forestry profitable” first and then solve environmental and social problems. It is necessary to support the socially responsible development of forestry, in which economic development is carried out with the irreplaceable protection of forest resources and the environment, considering the interests and well-being of future generations [11]. Moreover, the deterioration of the ecological state and social situation inevitably poses a threat to economic development [12].

It should be emphasized that the goal of “increasing the efficiency of forestry” is not a purely economic one, its achievement has social benefits, incl. creating jobs, increasing wages for workers in this industry, promoting the development of rural areas, etc. Thus, prerequisites are created for improving the ecological state and socio-economic growth of regions rich in forests. Sustainable development of forestry can be effective with sustainable use of forests, sustainable reforestation, and afforestation (while maintaining the natural potential of forests). The sustainability and efficiency of forestry depends on many factors, including the form of ownership of forests (as an indicator of the owner's interest not only in the use, but also in the restoration of forests), the model of forest management, including the model of interaction between the state and representatives of the forest business (in the form of forestry activities). Let us consider the foreign experience in the implementation of individual factors of sustainable organization of forestry according to the criteria: form of ownership, forest cover of the territory, forms of forestry activities (table 1).
Table 1. Factors of organizing sustainable forestry.

| A country | Forest area, 2020 (million ha) | Percentage of country land | Forms of ownership | Forms of forestry activities |
|-----------|--------------------------------|---------------------------|--------------------|----------------------------|
| Canada    | 347                            | 34.1                      | 93% of forest land belongs to the state, 7% is privately owned | Lease of forest land to timber merchants, which is accompanied by the issuance of forestry licenses giving the right to conduct forestry operations for up to 25 years, the creation of forest concessions, with payment of forest taxes, a model forest program |
| Germany   | 110                            | 31.8                      | Private forests about 50%, state - 30%, corporate - 20% | Acceptance by the state of part of the costs to maintain forests in a healthy state |
| Belarus   | 86                             | 42                        | Exclusive state ownership of forests | Division of activities into forestry production and production activities (logging and woodworking) |
| Brazil    | 497                            | 61                        | 66.5% - state and municipal forests, 33.5% - forests of other forms of ownership, private plantation forests occupy 4.6%. | Economic activity in protected natural areas is allowed only after the submission of a detailed forest management plan approved by the state environmental department |
| Finland   | 26.3                           | 72                        | The share of private forests - 61%, of which 9% are the property of private companies, 25% - state forests, in other forms of ownership - 5% forests | 80 million euros are allocated annually to support sustainable forestry (reimbursement of the costs of planting forests), the state subsidizes about 30% of the cost of building forest roads, a series of Mera programs |

So, based on a comparative analysis, the following conclusion can be drawn: sustainable efficiency of the forestry sector can be achieved with any chosen approach to the organization of forestry in terms of forest management. The most interesting is the experience of public-private partnership in the field of forestry, active interaction of all stakeholders - government, public and business. The form of such interaction is, as a rule, lease; forest concessions are widespread in Canada, where the model forests program is also operating. In Brazil, any forest management activity is allowed only after the submission of a detailed forest management plan drawn up by a specialist and approved by the state environmental agency. In Finland, the state financially supports forest owners for good forest maintenance, and private forest owners set up forestry associations to help them trade forest resources. A unique project is being implemented in the Republic of Belarus, where, in general, the centralized forest management system has been preserved. There, the activities of the leszhoves are divided into forestry production and production activities (logging and woodworking). Thus, the state itself extracts, processes, and sells wood, actively involving forests in economic circulation. A similar
practice exists in other countries, which indicates a direct interest of the state in effective sustainable forestry and forest management.

4. Discussion
The study of factors and conditions for organizing forestry in foreign countries determines the subject of discussion - the issue of justifying the choice of the best practices, the use of which will help to organize effective forestry in Russia in the context of the transition to sustainable development. When deciding the issue of reforming forest management in terms of determining the subject of management and the subject of forestry activities, the first question that arises is: about the owner of forests - is it possible to transfer the forest to private hands or the state should remain the owner of the forest. Acting as an owner presupposes effective forest management, which can be described as "sustainable management". When we speak of an effective forest owner, we mean an entity that is not just declared the owner but implements a whole range of measures to effectively manage the property. Based on the historical experience, practice of foreign countries and unique Russian conditions, in our opinion, the introduction of “private forest owners” in Russia is not expedient at present. Therefore, the state should remain the effective owner of forests.

Many issues related to the organization of forestry in the context of sustainable development are addressed through state support. The function of state support can be expressed in public-private partnership, the purpose of which is to ensure sustainable forest management, as well as to stimulate forest users to expand and more complete and efficient use of forest resources while ensuring a balance of interests of all participants in forest relations. The central element of public-private partnership in our country is the institution of leasing, which should be improved considering the goals of sustainable forest management. It is public-private partnership that will contribute to the creation of regional forestry clusters. In our opinion, tax and other benefits should be provided to enterprises of the timber industry complex in the case of scientific research in forests, the use of wood in the construction of houses and transport infrastructure, and the implementation of deep mechanical processing of wood.

5. Conclusion
Reforming economic relations, the transition to an innovative and "green" economy in Russia necessitates further development and implementation of an adequate organization of forest management. Ensuring sustainable forestry correlates not only with the international Concept of sustainable forest management, but also with the goals of the national Strategy for the development of the forestry complex of the Russian Federation until 2030, among which is the achievement of sustainable forest management, ensuring the outstripping growth of the forestry sector of the economy, social and environmental security of the country.

As a result of the study, we concluded that sustainable development of forestry is ensured, among other things, through increasing the efficiency of the economic component of the forest industry. And the economic efficiency of the forestry industry can be achieved with sustainable management, which includes the fulfillment of two conditions:

- Effective performance of the owner's function, while the form of ownership of the forest, as well as the approach to forest management, is not of fundamental importance, as evidenced by foreign experience. Russia should study and adopt the experience of countries such as Belarus, Canada, and Finland. However, in our opinion, the state can be an effective owner of forests in Russia, especially since the traditions of private forest ownership have been interrupted. Now, there is a corresponding legal basis for the transformation of the state into an effective owner of forest resources. For this, the sovereign state, represented by the federal center and the relevant authorities, should be responsible for ensuring public interests in terms of increasing the efficiency of the forestry sector;
- Active state participation in forestry in the form of public-private partnership.
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