
FORESTRY

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ON MANAGEMENT OF PROTECTED FORESTS

Research article

Abstract

The research on topics related to the management and organization of forest management activities in protected forests requires particular attention. Improving approaches to determining the most optimal forms of interaction between authorities and persons who use the forest. A vital priority in managing protected forests is the individual adjustment of the tools for evaluating its efficiency. The development of the forestry sector in the Republic of Crimea is possible through the improvement of the directions and tools of forestry management based on the collaborative efforts of the state and private institutions.

Keywords: forest Management, protected forests, forest regeneration, forest sector, forest fund.

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ВЕДЕНИЕ ЛЕСНОГО ХОЗЯЙСТВА В ЛЕСАХ ЗАЩИТНОГО НАЗНАЧЕНИЯ

Научная статья

Аннотация

Исследование вопросов, связанных с управлением и организацией лесохозяйственной деятельности в лесах защитного назначения требует особого внимания. Совершенствование подходов к определению, наиболее оптимальных форм взаимодействия органов власти с лицами, осуществляющими пользование лесом. Индивидуальная настройка инструментария оценки эффективности хозяйствования, являются первоочередными в управлении лесным хозяйством в лесах защитного назначения. Развитие лесохозяйственной отрасли в Республике Крым возможно посредством совершенствования направлений и рычагов лесохозяйственного управления, на основе слияния усилий государства и частных учреждений.

Ключевые слова: управление лесным хозяйством, Защитные леса, Воспроизводство лесов, Лесной сектор, Лесной фонд.

1. Introduction

Forest management in protected forests is a forest exploitation activity, as a result of which the environmental, water protection, sanitary, hygienic, health-improving, and other useful functions of forests are formed and improved, while using forests, provided that they are compatible with the intended purpose of protected forests and the functions performed by them. The article presents an analysis of the existing systems and methods of forest management as well as possible ways to improve the forest management tools in the Republic of Crimea.

2. Materials and methods

The materials of the research are the forest plan of the Republic of Crimea, forestry regulations, monographs, research articles, regional and federal regulations. The study applies the following methods and techniques designed for logical analysis and generalization of information: logical techniques (analysis, analogy, logical modeling, forecasting, synthesis) dialectical methods.

3. Results and discussion

Forestry is an economic activity in the forest industry of the Republic of Crimea that combines forest development and forest management under the jurisdiction of the Ministry of Ecology and Natural Resources of the Republic of Crimea. Forestry is involved in the formation of socioeconomic development of Crimea through the formation of economic indicators such as payments for the use of forests as well as forest income and profit of enterprises that utilize forest resources. The key economic goal of forestry is to obtain maximum economic efficiency from the use of forests with priority observance of environmental, water protection, sanitary, hygienic, health, and other useful functions of forests as well as compliance with the regulatory framework, social and environmental requirements [4], [5. P. 11, 20, 27].

The forest management system is based on the role and significance of each element of the system as a single mechanism. The restructuring of organizational forms and economic relations leads to a qualitative transformation of the forest management system, which is reflected in the practice of domestic and foreign experience in the field of use, protection, and regeneration of forests. According to L. M. Chernyakevich's model, the forest management system is based on:

- State forest management;
- Management of property in the forest;
- Management of forestry as a type of economic activity [26], [27], [28].

The purpose of forestry is to achieve the indicators defined by the forest policy of the Republic of Crimea. The achievement of indicators is carried out through the management functions that include the organization, planning, regulation, coordination, promotion, control, and accounting. In terms of content, the management functions are divided into two groups:

basic (organization of forest management, regeneration, protection of forests) and

auxiliary (presented in the informational, analytical and technical support of the main management functions). These functions can be carried out directly by state authorities in forestry affairs and independent organizations [2], [3. P. 34, 21, 22].

Forest management is based on the principles that define its scientific basis and regulations, which are formed from the nature of forestry affairs. These principles are scientific management, systematic approach, optimal combination of sectoral and territorial management, material and moral incentives, cost-effectiveness and efficiency, proper selection and placement of personnel, responsibility, continuity of management decisions, etc. [1], [18. P. 104, 107], [19], [20], [24], [25].

Evaluation of economic efficiency is carried out according to the 2012 order of The Ministry of Natural Resources and Environment, "The Methods of Evaluating the Effectiveness of Performance of Bodies of State Power of the Federal Subjects of the Russian Federation of Delegated Powers in Forestry Affairs". The evaluation is carried out by the Federal Agency for Forestry [19], [23], [24] according to the criteria that evaluate the quality of performance of duties for a respective fiscal year [29], [30], [31].

The National Rating Agency (NRA) with the support of the World Wildlife Fund of Russia has developed and proposed a methodology for rating state forest management in the subjects of the Russian Federation and has been rating since 2010 [29], [30], [31].

The rating calculation method determines the indicator that characterizes the level of forest management. The resulting rank is a letter designation (A, B, C). The basic principle of calculating an individual rating is based on the evaluation of indicators from the following seven criteria:

- organization of forest management and forest use;
- administration of law in the forestry sector;
- protection, and regeneration of forests;
- protection of forests from fires;
- economic efficiency of forest management;
- ensuring the environmental sustainability of forest management;
- information openness and participation of public in forest management.

The rating table is filled with the indicators included in the analyzed block. The final evaluation represents a sum for each block and forms a rating, which also includes the forest to land ratio of the area under evaluation [29], [30], [31].

The system for evaluating the efficiency of economic activity proposed by the National Rating Agency (NRA) with the support of the World Wildlife Fund of Russia provides an evaluation to very important criteria; however, its application is not universal. In the case of custom settings, the system can be used to evaluate the effectiveness of forest management in the protected forests of the Republic of Crimea. This is due to the biological and physical diversity, a high variety of places of management activity and business as well as other region-specific elements. The total forest area of the Republic of Crimea as of January 01, 2019 is 333.9 thousand hectares (12.79% of the total area of the Republic of Crimea), while the area of the forest fund of the Republic of Crimea is 10.7% of the total area of the republic. The aim of forests — protected forests. These include:

- Forests located in specially protected natural areas;
- Forests that perform the functions of protecting natural objects;
- Valuable forests;
- Urban forests.

According to the Forest Plan, the zones of forest exploitation in the Republic of Crimea are divided by types of their use:

- Crimean steppe zone;
- East Crimea;
- Mountainous Crimea;
- Crimean south coast zone [6. P. 9, 13].

In the 1950s and 1960s, work was carried out on afforestation and reforestation. Because of this, the forested area in the steppe zone and in east Crimea are occupied by artificial stands. The areas occupied by forests are not evenly distributed and are concentrated mainly in the mountainous and south coast zone of the peninsula. Among the political divisions the largest

area of forests is concentrated in the Bakhchisaray and Belogorsky districts in the cities of Alushta, Yalta, and Sudak. Therefore, the high variegation imposes an adjustment on this form [7. P. 14, 20], [8], [9] et al.

It is more rational and objective to take into account the area of the forest fund with an adjustment for the areas with and without forests. In addition, there are historically formed areas with favorable and unfavorable climatic conditions for the implementation of forestry activities. This fact suggests that in the foothill and mountainous part of the Crimea (northern slope, northern aspect of the mountains) where there are favorable natural and climatic conditions, deep soil horizon, high level of moisture, a high ombroevaporometric correlative ratio ("ombroevaparometrichesky korrelyativ", the ratio of annual precipitation to evaporation from an open water surface), a low wind load, and an optimal level of solar radiation influence. Accordingly, reforestation and protection measures are carried out with high efficiency and with optimal (acceptable) impacts. However, in the steppe zone of Crimea, mountain tops, the southern aspect of the mountains, the Crimean south coast zone, due to critical, extreme, natural, and climatic conditions, reforestation and protection of forests require particular attention. Achieving a relatively equal result in these areas requires a significantly higher amount of the funds invested per unit area than that of the investments allocated to the areas with favorable climatic conditions, which consequently makes respective adjustments in the process of calculating the characteristics of the level of forest management [7 P.67, 70, 74].

In this regard, the application of the amendments will allow a more informed and therefore more accurate evaluation of forest management at the regional level, on the level of forest districts, forest parks, and local forest owner organizations.

4. Conclusion

The most optimal forms of interaction between authorities and forest owners are possible with the competent implementation and help of the scientific basis of forestry. With custom adjustments to the evaluation of efficiency, it becomes possible to more reasonably and, in turn, with greater accuracy evaluate forest management at the regional level and at the level of forest districts, forest parks, and private organizations.

Conflict of Interest

None declared.

Конфликт интересов

Не указан.

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