

**СТАТЬЯ НОМЕРА  
MAIN FEATURE**

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**ЛЕСНАЯ БИОЭКОНОМИКА И УСТОЙЧИВОЕ  
УПРАВЛЕНИЕ ЛЕСАМИ. СУЩНОСТЬ**

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**Аннотация.**

На сегодняшний момент времени наиболее актуальна концепция устойчивого развития, а также все идеи, вытекающие из нее. Эта концепция может найти свое применение в тех организациях, которые используют стратегии «зеленого» маркетинга и находятся в постоянном поиске баланса между защитой окружающей среды и своим экономическим ростом. На данном этапе развития маркетинг должен оперативно реагировать на политические, технологические, природные изменения, подстраиваясь к ним. При этом маркетингу следует решить двоякую задачу. Так, в краткосрочном периоде проблемы социального и экологического характера оказывают значительное влияние на функционирующие организации и рынки. При этом предприятия должны адекватно реагировать не только на изменяющиеся потребности покупателей, но и на новые правила, а также современные социальные требования времени, которые являются отражением возрастающей обеспокоенности относительно тех последствий социально-экологического характера, которые несет за собой деятельность хозяйствующих субъектов. В долгосрочном же периоде для достижения устойчивого развития потребуются принципиальные изменения управленческой модели, которая заложена в основе маркетинга и иных бизнес-функций. Маркетологами должны не только пониматься экологические проблемы, но и обеспечиваться возможности по включению новых требований в процессы стратегического управления маркетинговой деятельности. Можно сказать, что те маркетинговые стратегии, которые обеспечивают экологическую чистоту, нередко занимают главное место в маркетинговой деятельности компаний.

**Ключевые слова:** биоэкономика, маркетинг, управление, лесное хозяйство, сельское хозяйство, лесопользование.

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**Marina A. Muravyeva, Olga G. Nazarova** | **FOREST BIOECONOMICS AND SUSTAINABLE FOREST MANAGEMENT. THE ESSENCE OF THE ISSUE**

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**Abstract.**

The concept of sustainable development and all the ideas derived from it are the most relevant at the moment. This concept can be applied to those organizations that use green marketing strategies and are constantly looking for a balance between protecting the environment and their economic growth. At this stage of development, marketing must quickly respond to political, technological, natural changes, adapting to them. In doing so, marketing must solve a twofold problem. Thus, in the short term, social and environmental problems have a significant impact on functioning organizations and markets. At the same time, enterprises must adequately respond not only to the changing needs of customers, but also to new rules, as well as modern social requirements of the time, which are a reflection of growing concern about the consequences of the social and environmental nature that the activities of business entities entail. In the long term, in order to achieve sustainable development, fundamental changes in the management model, which is the basis of marketing and other business functions, will be required. Marketers must not only understand environmental issues, but also provide opportunities to incorporate new requirements into the strategic management of marketing activities. We can say that those marketing strategies that ensure environmental cleanliness often occupy a central place in the marketing activities of companies.

**Key words:** bioeconomics; marketing; management; forestry; agriculture; forest management

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**Introduction**

Russia is the largest forest power in the world, it accounts for a quarter of the world's forest cover, which occupies about half of the country's territory. Forests for human life are the most important natural resource, comparable in importance only to water. Throughout the world, forests are considered as the basis for the well-being of the people and a guarantee of the well-being and sovereignty of the state [Strategy for the development, 2022].

In this regard, it is important to promote the concept of environmental marketing,

which can be defined as follows: a holistic management process responsible for identifying, anticipating and meeting the needs of customers and society, by making a profit and maintaining sustainable development [Muravyeva M.A., 2019].

This concept of marketing may seem somewhat paradoxical, as it combines concern for the environment (which traditionally includes a call for conservation) with the discipline of marketing (whose goal is to stimulate and encourage consumption). However, the concept of stability eliminates this seem-

ing paradox [Baker J. Michel. 2003], A sustainable approach to production and consumption is to meet the needs of the present generation, taking into account the living standards and needs of future generations. This concept has two parts:

1. Use natural resources at such a rate that ecological systems or human activity can replenish them. In the case of non-renewable resources, use them to the extent that renewable alternative resources could replace them.

2. Industrial waste and environmental pollution must be removed at a rate that can be absorbed by ecological systems without compromising their viability.

Thus, the basic concepts of environmental marketing are very simple, but they are not always so easy to apply in life. To a large extent, this is due to the fact that classical management is based on reductionism, which in turn is based on economic theories that mistakenly consider natural resources as an unlimited, free (repaid through extraction) source of raw materials [Zaitseva D.S., Kravovetskaya I.V., 2016].

### **Main part**

The economic activity of modern man interferes with natural cycles, breaking and opening them. This primarily applies to mining, the burning of fossil fuels, intensive agriculture and deforestation. As a result, we observe a decrease in biodiversity, an imbalance in the cycles of individual elements, and global processes of climate change.

In search of ways to reduce the anthropogenic negative impact on the natural life processes of the Earth in 2015, the concept of a closed-loop bioeconomy was proposed (Figure).

A circular bioeconomy involves the use of renewable biological resources on land and sea, in other words, natural capital for the production of food, biomaterials, bioenergy and bioproducts. The idea of transition to a cyclical bioeconomy is to significantly reduce the extraction of conditionally non-renewable resources from the depths, such as oil, minerals, metals, and replace products made from

them with biomass materials of similar characteristics. For example, instead of plastic from hydrocarbons – bioplastic from starch or cellulose, instead of brick and concrete – wood, instead of burning coal and gas – using the energy of water, wind and sun to generate electricity.

The development of the bioeconomy involves the use of a huge amount of biomass, which can be obtained primarily from the forest. Currently, too many trees are cut down all over the world, environmentalists talk about the need to save forests, protect them from clear-cutting and fires. If we replace fossil raw materials for the production of various kinds of products with wood, then humanity will need many times more forests. How can we conserve forests and increase their use at the same time?

The Swedish Forest Industries Federation believes that forest products are part of a natural circular ecocycle that begins and ends with photosynthesis. Active forest management and production of products from forest resources, subject to certain rules, can contribute to a closed cycle [Vakhrusheva Ksenia 2021].

Much attention is paid to the 100% use of each tree. Building materials and furniture are made from the thick part of the tree-trunk. The thinner part of the stem is used to produce pulp, which is then processed into paper, cardboard and textiles. Small branches, crown and wood chips are suitable for the production of bioenergy, biofuels and chemicals.

For Russia, the issue of sustainable forest management is also relevant. Russia needs a forest bioeconomy of a closed cycle. The forest includes wooden housing construction, and bio-products from wood, slash residues, waste, cellulose, lignin, and pharmaceutical products, paper and fiber packaging instead of plastic, and hygiene and health care products. These are also new energy solutions, bioenergy products and, ultimately, new jobs in the city and in the countryside.

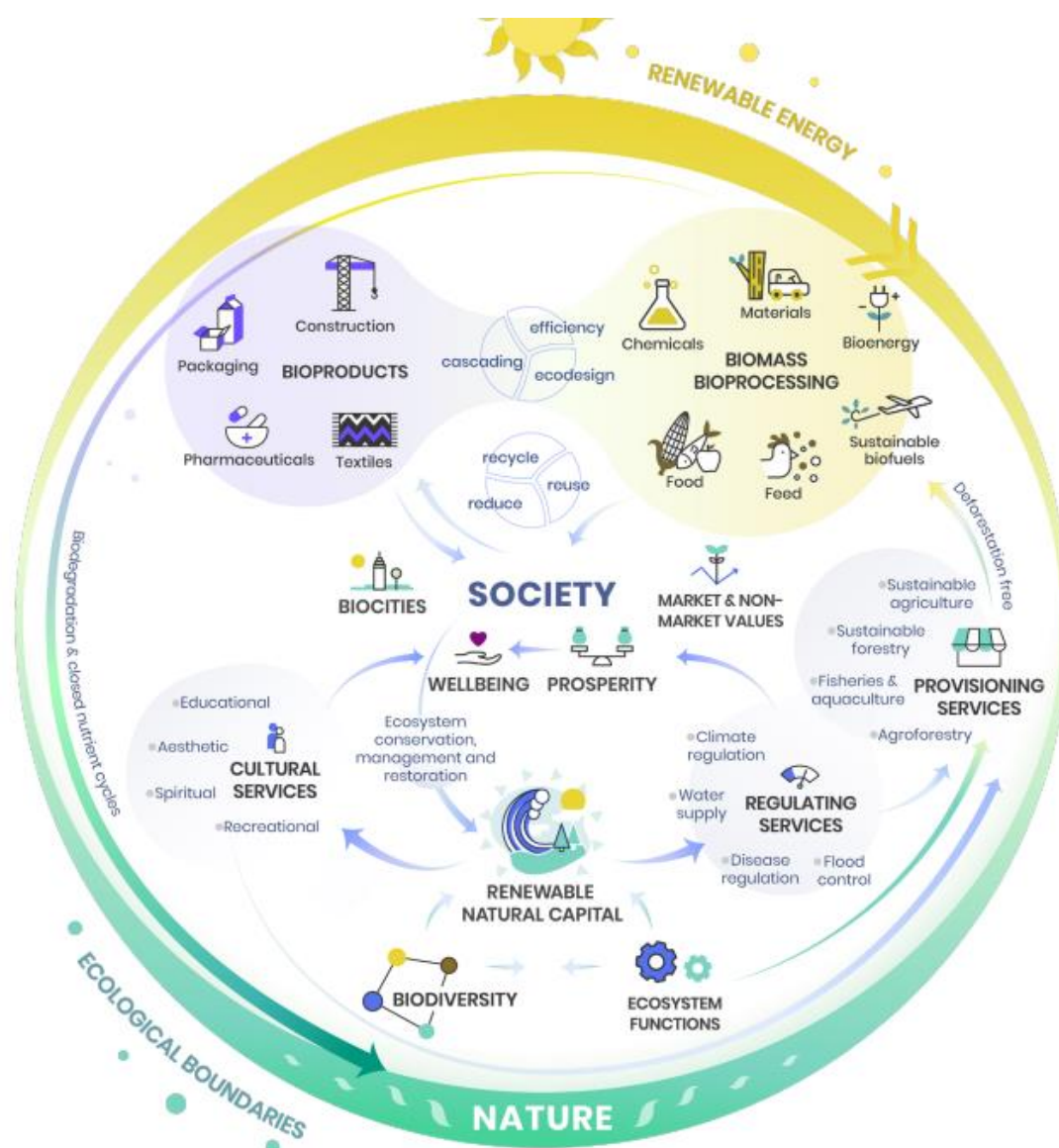


Рис. Круговая биоэкономика  
Fig. Circular bioeconomy

Source: [Palahí, M., Pantisar, M., Costanza, R., Kubiszewski, I., 2020]

According to the strategy for the development of the forest complex of the Russian Federation until 2030, forests located on agricultural lands deserve close attention. As a priority measure, an inventory and accounting of forests located on such lands is required. For the effective involvement of these forests in the socio-economic development of rural areas, it is necessary to propose models of economic activity, take into account the interests of the local population. It should be taken into account that in forests on agricultural

lands not used for agricultural production, as well as in forests on forest fund lands, the absorptive capacity of forests should be maintained and increased, as well as its maximum possible consideration in the implementation of the mechanisms of the Paris Climate Agreement dated 12 December 2015, signed on behalf of the Russian Federation in New York on April 22, 2016, adopted by Decree of the Government of the Russian Federation dated September 21, 2019 No. 1228 "On the adoption of the Paris Agreement" (hereinafter

referred to as the Paris Climate Agreement). Taking into account the special role of forests on agricultural lands located near rural settlements, it is necessary to establish a forest management regime that ensures the right of citizens to a favorable environment [Strategy for the development, 2022].

Forests growing on agricultural land are one of the most important forest categories in Russia. As a rule, they are located on fertile lands in areas with the most favorable climate for crop production (in the historical past, these were primarily developed for the development of agriculture) – therefore, they are more suitable than other forests for intensive forest cultivation. Most often, these forests are located closest to people, near a relatively developed transport infrastructure, and in many cases directly border rural settlements. Conducting intensive forestry in these forests will create additional jobs and opportunities for the socio-economic development of the village. For many residents of rural settlements and small towns, it is these forests that form a favorable environment. Most of these forests require special attention in terms of ensuring fire safety – since the main source of fire in the forests is a person, and it is in the forests closest to him that the risk of fires is highest. However, the current Russian forest and related legislation does not recognize the right to exist for these forests. According to the law, it's as if they don't exist, no one is responsible for their protection, including from fires, and the owners of land plots for the very fact of the existence of such forests on their lands can be subjected to large fines (up to 700 thousand rubles) and forced withdrawal of the plot.

The areas of such forests are very large, and together they make up about one hundred million hectares, or about ten percent of all forests in Russia. At the same time, such forests account for up to 25% of the total increase in wood in forests suitable for intensive forestry [Recommendations based on the results, 2022].

In the modern view, forest management, in most cases, is a special type of land use, in

which for a long period (cutting turnover) one type of phytoproduct is grown – wood.

The fundamental difference between forest plantations and traditional agricultural crops is the duration of crop cultivation, its size, and the fact that in forest plantations a wide range of useful products can be obtained for a felling turnover, the “production” processes of which run in parallel and do not interfere with each other. This property of the forest has been known to mankind for a long time, for example, the spring collection of tree sap, the summer and autumn collection of mushrooms and berries, etc.

In recent years, such a type of forestry business as the collection and processing of forest food products, mushrooms and berries has been dynamically developing in Russia. But all this applies to naturally grown phytoproducts.

For large agricultural producers, one field is occupied only with wheat, and the other with corn, and only, for example, apples are grown in the garden. On the other hand, smallholders can observe how beds with vegetables are placed under the apple trees, and late crops are planted in the middle of the beds with early produce.

In this case, the land is obviously used more rationally, but the mechanization of the process of “production” of agricultural products is very difficult and requires a large amount of hard manual labor [Alice E., 2002; Edible Forest Gardens, 2005; North American Agroforestry, 2009].

The creation of a new sector of the economy in Russia opens up opportunities for owners to more efficiently use lands that have been retired from agricultural use, including due to objective socio-economic reasons (in particular, the intensification of agriculture, which makes it possible to grow the volumes of agricultural products necessary to ensure food security on a smaller area).

At the moment, there is a need to introduce forestry as a new type of agricultural land use. The prerequisites for the development of this kind of activity were laid down by the President of the Russian Federation in

2020. They instructed the Government of the Russian Federation "to take measures aimed at establishing the features of the use, protection, protection and reproduction of forests located on agricultural lands, providing for the possibility of carrying out all types of forest use on lands of this category without the need to change the form of ownership of land and change the category lands"

On February 9, 2021, the Ministry of Natural Resources and Ecology of the Russian Federation published for public discussion the Draft Decree of the Government of the Russian Federation "On Amendments to the Decree of the Government of the Russian Federation of September 21, 2020 No. agricultural purposes". This project actually provides for a complete ban on the use of agricultural land for forestry.

The project of the Ministry of Natural Resources of the Russian Federation introduces a permit procedure (instead of a notification one – in the current version) for the use, protection, protection and reproduction of forests located on agricultural lands. At the same time, the owner's ability to obtain a positive decision is severely limited in terms of terms (applications from the owner are accepted only until October 1, 2022) and the parameters of the land plot (it is possible to use only grown forests with a height of more than five meters and crown density of at least 80%, occupying at least 75% of the plot, which by default makes it impossible, in particular, the creation of forest plantations on agricultural land) [Zaitseva D.S., Krakovetskaya I.V., 2016].

In addition, the draft contains norms providing for a direct ban on the use of agricultural land for forestry:

- "The period of use, protection, protection, reproduction of forests is set equal to the period of granting a land plot, but not more than 10 years from the moment a positive decision is made by the interdepartmental commission";

- "After the expiration of the use of forests located on agricultural lands, provided for in the forest development project in accord-

ance with paragraph 21 of this Regulation, the right holder is obliged to carry out cultural and technical reclamation in order to involve such lands in agricultural circulation in accordance with Article 8 of the Federal Law "On Land Reclamation".

These norms directly contradict Article 123 of the Forest Code of the Russian Federation, which provides for the possibility of the existence of forests on agricultural land (without a time limit).

Thus, the project of the Ministry of Natural Resources contradicts the position of the President of the Russian Federation, and its implementation will lead to the impossibility of fulfilling the presidential order (clause 3, b), Pr-126 of 01/29/2020).

After involvement in the agricultural turnover of lands overgrown with forests, the forest will not remain on their territory, it will be destroyed by the method of "clear felling" prohibited in forestry activities.

The unique natural landscapes formed on abandoned agricultural fields are the Forest. The forest can be saved through the following actions:

- call on the regional authorities to conduct an objective assessment of agricultural land covered with forests;
- clarify the legal status of lands and draw clear boundaries;
- recognize unoccupied farming lands overgrown with young forest – Forest, with transfer to the forest fund for natural growing;
- oblige those responsible to restore the destroyed forest stand fivefold;
- oblige those responsible for the destruction of the forest – to carry out and long-term control of measures for the organization of forest protection and forest fire safety with the imputation of subsidiary liability;
- save the wild forest and increase our wealth together.

Also 1.1 To the Government of the Russian Federation: Amend the Land Code of the Russian Federation to allow the existence of forests on agricultural lands and the use of these lands for forestry (by analogy with the

existing type of use of agricultural land for "fish farming");

- Part 2 of Article 77 after the words "ameliorative protective forest plantations," add the word "forests";

- Part 1 of Article 78 after the words "creation of ameliorative protective forest plantations," to add the word "forestry";

- Part 4 of Article 78 after the words "not related to agriculture" shall be supplemented with the words "and forestry".

1.2 Rosrestru of the Russian Federation: to make changes to the Classifier of types of permitted use of land plots that allow the use of land plots from the composition of agricultural land for forestry:

- add the line "Forestry" to the type of permitted use "Agricultural use".

2.1 To the Government of the Russian Federation: to amend the Decree of the Government of the Russian Federation dated September 18, 2020 No. 1482 "On signs of non-use of land plots from agricultural land for the intended purpose or use in violation of the legislation of the Russian Federation" to allow the use of agricultural land for forestry, regardless of the presence of weeds vegetation and/or turf:

- add the line "The features specified in paragraphs 1, 2 of this document are not taken into account if they are identified on land plots that are used in accordance with the Regulations on the features of the use, protection, protection, reproduction of forests located on agricultural lands, approved by the resolution Government of the Russian Federation dated September 21, 2020 No. 1509.

3.1 To the Government of the Russian Federation: to amend the Decree of the Government of the Russian Federation of September 21, 2020 No. 1509, establishing the requirements to prevent damage to forest plantations outside the boundaries of the land plot, as well as to exclude the requirement for the prohibition of leaving felled wood for thinning in young forests:

- Clause 13, c) shall be stated as follows: "damage to forest plantations, vegeta-

tion cover and soils outside the boundaries of the land plot is not allowed";

- Clause 13, d) shall be amended as follows: "it is forbidden to leave blockages (including felled trees and trees left in felling areas, except for cases of felling for young growth) and felled hanging trees."

### Conclusion

For a balanced use of forests, it is necessary to move from the model of exhaustive forest management to the model of forest cultivation of target tree species for production needs and the provision of ecosystem services.

Among the problems that hinder the development of a circular bioeconomy in Russia, experts name the following:

- lack of a national strategy for the development of the bioeconomy;

- low level of development of biotechnologies and a meager share of Russia in the world markets of biotechnologies;

- the lack of an objective comparative analysis of the sustainability of value chains based on forest biomass, on the one hand, and fossil fuels, mineral raw materials, on the other;

- lack of a deep understanding among decision makers of the real value of biodiversity, supporting and regulating forest ecosystem services;

- lack of assessment of the simultaneous provision of multiple ecosystem services by forests, synergies and trade-offs between them;

- lack of reliable information about forests;

- the current model of unsustainable use of forest resources ("log mining");

- low level of financial support by the state and business of scientific projects and programs aimed at the development of forest bioeconomy;

- low public awareness of the benefits and benefits of a circular forest bioeconomy.

The proposed legal solutions will help the development of a circular bioeconomy in Russia.

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