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ПРЕОДОЛЕНИЕ ДЕПРЕССИВНОСТИ ГОРОДА-КУРОРТА ЮРМАЛА ПУТЕМ СОЗДАНИЯ В РЕГИОНЕ ТУРИСТСКО-РЕКРЕАЦИОННОЙ ЗОНЫ

Проанализировано состояние свободных экономических зон в Европейском Союзе. На примере города-курорта Юрмалы выявлены факторы депрессивности, а также сильные и слабые стороны региона. Для устранения депрессивных факторов, восстановления и развития курортно-рекреационной деятель-

ности, предлагается создать в городе и прилегающим к нему регионам туристско-рекреационную зону.

Ключевые слова: специальные экономические зоны, депрессивный регион, город-курорт Юрмала, медицинский туризм, туристско-рекреационная зона.

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DEVELOPMENT OF THE ESTIMATION METHODOLOGY FOR THE COMMERCIAL BALANCE OF THE MARKET OF SOCIAL AND ENVIRONMENTAL SERVICES OF FORESTS

Розроблена і обґрунтована методика оцінки комерційного балансу ринку соціально-екологічних послуг лісу, як нової для лісового сектору економіки України еколого-економічної системи. Комерційний баланс визначено як співвідношення між обсягом соціально-екологічних благ, який можуть генерувати ліси певних територій і обсягом комерційних пропозицій на споживання цих благ. Можливості лісу щодо надання послуг запропоновано визначати через рівень лісистості територій і структуру лісів.

Ключові слова: соціально-екологічний потенціал, ринок соціально-екологічних послуг, комерційний баланс ринку, природні зони, оптимальна лісистість.

1. Introduction

Significant prospects for development of the economic space of the forest sector of Ukraine's economy are related to the capitalization of the social and ecological potential of the forest, it calls for the formation of new ecological and economic systems for the forestry of Ukraine. In particular, the market of social and environmental services of the forest, the object of which is a special commodity is the social and environmental service.

The opportunities for the active development and functioning of any commodity market depend on the filling of the market with the goods (market volume) and on the marketing environment, the main component of which is real and potential demand. With certain approaches to the evaluation of any commodity market and forecasting possible demand, the specificity of the market for social and ecological forest services as an ecological and economic system requires new approaches to the analysis and evaluation of its state and development dynamics. The specificity of such market is determined by the following: the market object is a social and environmental service; the producer of the goods – the social and ecological potential of the forest and the subjects of forest manage-

ment; consumer – economic entities of other industries and social actors. A special problem lies with consumers who unambiguously perceive the policy regarding the need to pay certain funds for using the natural resource of the forest, which they are accustomed to use for free, necessitating the development of a methodology for evaluation of the commercial balance of the market. These features motivate to determine the commercial balance of the market as a ratio between the volume of social and environmental benefits that can generate forests and the volume of these goods, for which they are willing to pay, and the volume of commercial consumption. That is, the evaluation of the commercial balance of the market, to a large extent, aimed at those components of the intangible benefits of the forest, which, under certain eco-natural and economic features of the territories, can acquire demand and be the object of commodity-money relations.

The problem of commercial balance of the market of social and ecological services of the forest is that its evaluation should be carried out in several directions. The first direction is the potential capacity of the forest to generate social and environmental benefits. The second direction is the level of social and ecological tension of the territories, it can form a potential demand. The third

direction is the volume and range of social and environmental services that consumers are ready to pay for today, which determines real demand.

2. The object of research and its technological audit

The commercial balance of the market, as *an object of research*, is the ratio between the volume of services (supply) that can be provided by forests of certain territories and the volume of services for which consumers (commercial demand) are ready to pay today and in the future.

The methodology for evaluation of the commercial balance of the market is a set of sequential measures, the implementation of which will allow to compare the capabilities of the producer of goods to provide the market with quality goods and the possible commercial demand for such goods. The potential of the forest to generate high-quality social and environmental services of the required range (supply), in most cases, is determined by the level of forest cover and the structure of forests. Demand for social and environmental services of forests is formed in accordance with the social order, the level of environmental tension, the economic environment of the territories and the activity of marketing activities. One of the most problematic areas of the research object is that the commercial balance of the market, as a known economic category, needs to be developed in order to transform it into a market for social and ecological forest services, a new ecological and economic system for the forestry sector of Ukraine.

3. The aim and objectives of research

The aim of research is development of a methodology for evaluation of the commercial balance of the market for social and environmental forest services, which will allow to determine the prospects for establishment and functioning of the market in these natural areas.

To achieve the aim it is necessary to solve the following tasks:

1. To analyze and assess the level of forest cover and forest structure by species and age of trees in the natural zones of Ukraine.
2. To identify environmental problems and social needs that can be localized (eliminated) and satisfied by using the socio-ecological functions of the forest.
3. To assess the prospects of Ukraine's natural areas for the formation of regional markets for socio-ecological forest services.

4. Research of existing solutions of the problem

The problem of capitalization of socio-ecological benefits of forests is covered in many well-known scientific studies. In work [1] it is determined that tourist firms that specialize in forest tourism receive more than 60 % of their profits due to the socio-ecological functions of the forest. It is fresh, saturated with healthy air connections of forest territories, wonderful forest landscapes, diversity of flora and fauna attracts tourists and forms a marketing environment. At the same time, forest management entities are forced to incur certain losses in maintaining the ecosystem in a quality, attractive for tourists' state.

Such problem situation can be solved in the context of commodity-money relations between tourism firms and forestry entities. Sustainability and prospects for such relations can be highlighted precisely by the commercial balance between the possible volume and demand.

According to the statement [2], the socio-ecological resource of the forest, as a public good, can be an object of capitalization for those economic entities, the use of such a resource receives additional profit. Such consumers should pay forestry entities a fee in the form of a rent for the use of these natural resources.

In work [3] it is noted that the commercial orientation of the use of socio-ecological benefits of forest is possible only with certified forest farms, where the use of both tangible and intangible benefits of the forest is carried out according to the concept of sustainable nature management. Such approaches allow to constantly maintain a commercial balance between the resource potential and the volume of consumption.

According to [4], nature, in particular the forest, is not able to independently acquire that consumer value that is in demand in those or other ethno-natural or economic territories. It is the person who must ensure optimal forest cover and optimal structure of forests under the economic and social order, which will allow providing high-quality services in the right amount and the right assortment.

According to the statement [5], the level of the social and ecological potential of the forest depends on the level of material load, the volume of seized timber. This is the determining factor in ensuring the necessary commercial balance.

In works [6, 7] it is substantiated that the capitalization of the non-material component of the natural resource of forest, to a large extent, improves the investment climate in the forest sector of the economy. Terms for the return of environmental investments (investments in the development of socio-ecological resources) are much less than the timeframe for return of financial and material assets invested in the timber cultivation. They argue that the concept of sustainable development, which is declared at the level of forestry policy, with a certain demand for social and environmental services, may shift the structure of forest production, at least at the regional level, toward capitalizing the intangible benefits of the forest. This may cause the need to adjust the plans for restoration of forests according to the structure of the species composition of the plantations and the spatial allocation of new plantations.

There is an opinion [8] that interaction between public institutions and the subjects of the forest sector occurs mainly in two directions: political and market. The demand for market products is mainly expressed in the market dimension, whereas most other requirements declared by the forest sector are reflected in government policies and regulations. In addition, there are direct links between the society and the forestry sector of the economy, which, for example, are reflected in corporate social responsibility.

Such opinion aims at the need to bring the political regulators of forest management closer to the conditions of market transformations and to activate the social movement for environmental protection.

There are solid studies [9, 10], which prove that the capitalization of the socio-ecological benefits of the forest

is the way to a harmonious combination of natural, economic and social interests. These interests consist in the possibility of preserving forests, obtaining certain economic benefits and satisfying a whole range of social needs. At the same time, it is possible to effectively implement the social and environmental potential in an in-depth study of the complex of social and environmental needs of a particular region, which is largely determined by the natural and economic environment.

With these studies addressing the problem of capitalization of social and environmental benefits of forests through the formation of a market for social and environmental services, it follows that an important prerequisite for the formation of the market is the corresponding commercial balance of the market, an important component is the total amount of forest resources. According to the State Forest Inventory as of 2016, the area of the land of the forest fund of Ukraine was 10,800,000 ha, incl. Covered with forests is more than 9600,000 ha, which is about 15.9 % of the total territory of the country.

However, considering the problem of forest cover, a significant part of forest researchers, agree that it is not necessary to focus on the total numerical value of forest cover. According to the statement [11], the organization's task is formation of the optimal forest cover of the state territory, it is not reduced to a common gross, but to the definition of a wooded area in ecologically and socially tense territories. The following indicators of the optimal forest cover of some ecologically and socially tense territories are justified, namely:

- areas where there is a danger of floods, as well as banks of rivers and water bodies – an optimal forest cover of 37 %;
- areas where mudflows and landslides are possible – 32 %;
- areas of danger of wind erosion of soils – 28 %;
- areas of «green zones» (territories of settlements) – 13 %;
- protective areas – 6 %;
- roadside areas – 1 %.

The above indicators for the percentage of afforestation of socially and environmentally stressed areas should be considered as averaged. Geographical location of the territory, climate, terrain, groundwater can influence the forest optimum of such territories. According to the research [12], the optimal forest cover of the Siversky Donets floodplain is 60.3 %, Psel – 35.4 %, Vorskla – 40.4 %, and the minimum necessary forest cover of treeless plains should reach 15–20 %.

It is determined that the maximum increase in underground feeding a year does not occur at 100 % of the forest cover, but at a lower level: 45–60 % in the Polesie, 20–40 % in the forest steppe, 15–19 % in the steppe, that is an increase in the forest cover in excess of these values doesn't result in an increase in the water protection role of the forest [13].

The results of the research conducted by the Ukrainian Forest Research Institute on the optimal forest cover of the administrative territories of Ukraine make it possible to conclude that the forest cover of all administrative territories, except Chernivtsi region, does not reach the optimum. At the same time, in most areas, in order to achieve optimal afforestation, it is necessary to increase the land of the forest fund or to involve agricultural and

other lands. For the market of social and ecological services of the forest, the increase in forest areas determines additional sources of filling the market with goods, and the achievement of optimum forest cover in special territories affects the «quality» of the goods – the maximum manifestation of the ecological and social benefits of the forest is achieved.

Optimization of the wooded areas of natural areas gives confidence that regional markets for social and environmental services will have a reliable source of «quality» goods. At the same time, it should be taken into account that with a wide product range (a set of social and environmental forest benefits, today it has more than 150 species and has a steady tendency to increase). The peculiarities of the region and the economic situation in it can influence the formation of demand on specific types of social and environmental services. Such services can qualitatively satisfy specifically specific types of trees. Therefore, along with quantitative indicators, the analysis of the socio-ecological potential of forests should concern the structure of the forest by species and age of trees.

The optimal structure of the forest is a state of the forest in which maximum opportunities are created for the most complete satisfaction of the needs of the national economy in wood, the resources of non-wood vegetation, the social and ecological functions of forest plantations with minimum costs for their use, protection and restoration.

The commercial balance of the market for socio-ecological forest services is, to a large extent, related to the ecological, social and economic situation of the territories, and determines the level of environmental safety in these territories. It is this situation that generates the corresponding set of needs for the social and environmental properties of the forest, namely such properties can be in demand, that is, acquire the form of goods and be the object of the regional market of social and environmental services of the forest, and shape the marketing environment of the market.

5. Methods of research

Investigation of ways of solving the problem in evaluation of the commercial balance of the market for social and ecological forest services is carried out using the following methods:

- optimization – in evaluation of the level of forest cover of natural areas, as a factor that determines the possible volume and quality of the socio-ecological resource;
- method of grouping and classification when evaluation of the structure of forests in natural areas of Ukraine by species of trees and age that determines the possible range of social and environmental services;
- method of analysis and synthesis – in determining the level of ecological tension in the territories;
- marketing research – in determining the structure and volume of real and potential demand as a social order of certain ethno-natural territories;
- method of systematization in determining the commercial balance as a set of interrelated components, namely: the volume and quality of the socio-ecological resource, the range of social and environmental services, environmental threats, economic and social needs.

6. Research results

The carried out researches allow to offer an estimation methodology of a commercial balance of the market of social ecological services of a wood as complex, system category. This category combines the possibilities of the forest to generate the necessary volume of quality services, a certain range (supply) and the level of readiness of economic and social agents of certain territories to pay for such services (demand).

Analysis and evaluation of the commercial balance of the market of social and environmental services of forests should be started with a study of the socio-ecological state of the territory on which it is possible to form such commodity market. The research results can give an opportunity to determine both the environmental problems and the package of social orders of the population of the territories, as well as to structure these aspects in terms of the level of danger and the degree of importance. This determines the possible demand, as a component of the commercial balance, and the prospects for market changes in the use of the social and environmental potential of forests. Market outlooks on demand can acquire real market manifestations if one determines the possibilities of forests (proposals) for solving environmental problems and meeting environmental needs. Such opportunities (proposals), as a component of the commercial balance of the forest, are largely determined by the level of the forest area of the territory (it is a certain indicator of the volume of the market) and the structure of forests by species and age of wood (a certain indicator of the possible product range of the market).

Socio-ecological opportunities (resource) forests can acquire the form of goods, if they exist (formed) demand (marketing environment). That is, there are real and potential consumers who understand the entrepreneurial and social benefits of consuming such resource and are willing to pay for it (Fig. 1).

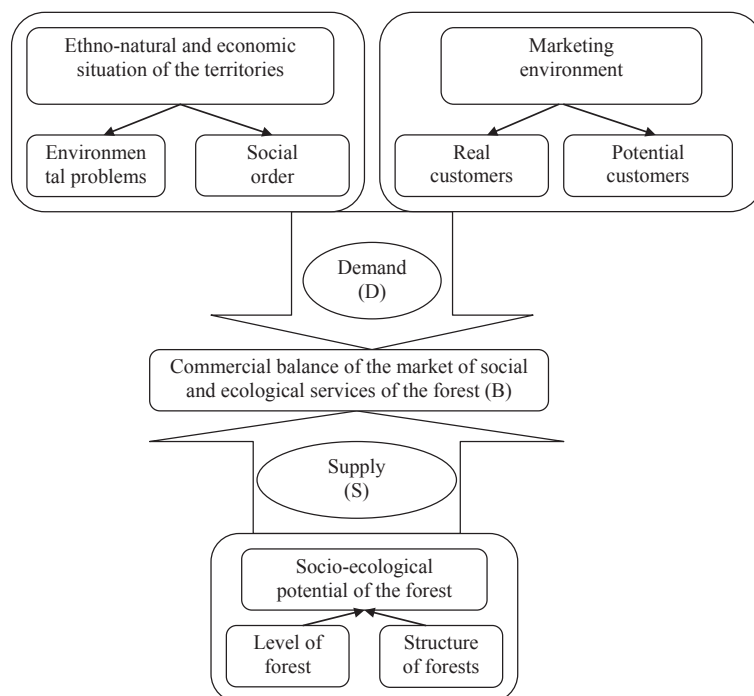


Fig. 1. Methodology for evaluation of the commercial balance of the market of social and environmental services of the forest

The above methodology makes it possible to determine the commercial balance of providing the market by physical (quantitative) measurements:

- for i -th kind of services (B_i) ($i=1,2,\dots,n-1, n$);
- on the general commercial balance of the market of social and environmental services (B^*), if to determine the share of one or another type of services in the total market volume (α_i).

That is, if the demand for the i -th type of services (D_i) in certain units of measurement is formed or forecasted in certain territories, and the forest can generate high-quality services of the i -th type (S_i) in the same units, then the balance of providing the market and that type services is determined by the expression:

$$B_i = D_i - S_i. \quad (1)$$

If the result is marked with a «-», then the social and ecological resource of the forest of these territories at the time of the study can't meet the demand (deficit), if with the mark «+» (surplus), the prospects for market development in conditions of active implementation of marketing activities.

Accordingly, the total commercial balance of the market is determined by the expression:

$$B_i = \sum_{i=1}^n \alpha_i * B_i. \quad (2)$$

Practical application of the methodology will make it possible to determine the real opportunities and prospects for capitalizing the socio-ecological benefits of forests in certain ethno-natural and economic areas. That is, with the prospects for the formation and functioning of the market of social and environmental services.

7. SWOT analysis of research results

Strengths. Investment attractiveness, which is determined by the prospects of the direction of activity and the shorter time of return of environmental investment.

Weaknesses. The complexity of forming a marketing environment for the market of social and environmental services of the forest is caused by the reluctance of some economic entities to pay for the social and environmental benefits of the forest.

Opportunities. Expansion of the economic space of the forest sector of the economy of Ukraine due to capitalization of the social and ecological resource of the forest.

Threats. Absence of a regulatory framework for servicing the processes of providing and consuming socio-ecological forest services on a commercial basis.

8. Conclusions

1. It is established that the opportunities for active functioning of regional markets are estimated by the level of forest cover and forest structure. When analyzing the level of

the forest area of the territory, an optimization method was applied, which allows to reconcile two factors: the ecological and social intensity of the territory and the size of the area covered by forest cover. When analyzing the structure of forests, the grouping method is applied, which allows to identify groups of tree species that are capable of generating a certain range of services. The market outlook is determined by the real and potential demand, the evaluation of which is carried out by the method of analysis and synthesis and marketing research.

2. The research results makes it possible to determine both the environmental problems and the package of social orders of the population of the territories, and to structure these aspects according to the level of danger and the degree of importance. This determines the possible demand, as a component of the commercial balance, and the prospects for market changes in the use of the social and environmental potential of forests.

3. Market outlooks on demand can acquire real market manifestations if one determines the proposals for solving environmental problems and meeting environmental needs. Such opportunities as the component of the commercial balance of forests are determined by the level of forest cover of the territory and the structure of forests by species and age of wood.

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РАЗРАБОТКА МЕТОДИКИ ОЦЕНКИ КОММЕРЧЕСКОГО БАЛАНСА РЫНКА СОЦИАЛЬНО-ЭКОЛОГИЧЕСКИХ УСЛУГ ЛЕСА

Разработана и обоснована методика оценки коммерческого баланса рынка социально-экологических услуг леса, как новой для лесного сектора экономики Украины эколого-экономической системы. Коммерческий баланс определен как соотношение между объемом социально-экологических благ, которые могут генерировать леса определенных территорий и объемом коммерческих предложений на потребление этих благ. Возможности леса по предоставлению услуг предложено определять через уровень лесистости территорий и структуру лесов.

Ключевые слова: социально-экологический потенциал, рынок социально-экологических услуг, коммерческий баланс рынка, природные зоны, оптимальная лесистость.

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