

GREEN TOURISM AS A COMPONENT OF SUSTAINABLE DEVELOPMENT OF THE REGION

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Abstract

The purpose of this article is to study the role of green tourism as a component of sustainable development of the region and to determine the level of rural green tourism development of the region. This scientific work is based on such general scientific, specific and economic methods as: analysis and synthesis, dialectical, systematization, induction and deduction, generalization, analytical, abstract logical, statistical analysis, graphic, economic and mathematical modeling. It has been proven that it is appropriate to identify green tourism with sustainable development, which is based on its basic task - achieving the integrity of as many natural and recreational resources and cultural heritage as possible. Taking into account the above, sustainable development is aimed at ensuring the needs of consumers, protecting and increasing returns from its operation in the future. Green tourism in the system of sustainable development is considered according to its goals. In order to achieve the goal, the article proposes to determine the level of development of rural green tourism by region and differentiate them according to this indicator. That is why the author proposed a methodology for assessing the level of development of rural green tourism with a detailed disclosure of each of its stages. Approbation of the proposed methodical approach was carried out, as a result of which regions were grouped into groups with different levels of development of rural green tourism. Reducing the asymmetry of regional development in terms of green tourism will help increase the level of ensuring their sustainable development.

Keywords: *green tourism, rural green tourism, sustainable development, region, economic development.*

JEL Codes: *R11; R12.*

Introduction

Green tourism can be considered one of the most relevant areas of economic development of the country, including its rural areas. When studying this category as a certain type of tourist activity, it should be considered not only from an economic aspect, but also

from a social and ecological one, given that it contributes to the economic recovery of territories rural areas, the preservation of their traditions and culture, and deters negative demographic processes. In most countries of the world, green tourism is an indivisible

leading component of the sustainable development of the country and its regions. It is a factor that significantly affects the formation of conditions for the development of entrepreneurship and the realization of its potential, reducing the unemployment rate, increasing the level of income of local budgets, motivating the creation of social infrastructure, etc. However, it should be noted that it is necessary to take into account the structural and spatial aspects of the natural resource potential of the region, the employment of the population, the quantitative and qualitative side of the existing infrastructure facilities.

In Ukraine, green tourism develops uncontrollably and spontaneously. A large number of domestic business entities in the tourism sector conduct their activities in the shadows with a low level of stimulation to legalize their functioning, without state support and in conditions of imperfect regulatory and legal frameworks. The lack of a strategic vision regarding the development of green tourism, especially in the part of rural green tourism, has a very negative effect on the realization of both natural and historical-cultural potential, exacerbating the problem of the depression of the Ukrainian countryside. And therefore, support for its functioning and development is extremely necessary, taking into account the ability to form a synergistic effect of the development of rural areas. In current conditions of instability caused by various factors, green tourism forms possible options for meeting the needs of recreation within the flow of domestic tourists, contributing to the ability and perspective of the development of the economy of rural areas.

The purpose of the article is to study the role of green tourism as a component of sustainable development of the region and to determine the level of rural green tourism development of the region.

Literature review

Many studies by leading scientists are devoted to the problems of sustainable development. Among the scientists who

conduct scientific research in the field of green tourism in the context of sustainable development, it should be noted: Abdulaali H.S. et al. (2019); Aldous D.E. (2013); Jahid J. (2019); Li X. (2022); Misso R. et al. (2018); Nguyen H.P., Bui, V.D. (2021); Yousaf Z. et al. (2021) and other.

The authors of the article (Li X., 2022) investigate the impact of environmental perception of corporate social responsibility on the sustainable development of tourism. The practical significance of the study (Yousaf Z. et al., 2021) lies in the analysis of the impact of green motives and green business strategies on sustainable development in the hospitality sector. Scientists (Nguyen H.P. et al., 2021) have proven the existence of relationships between research concepts, including corporate social responsibility and green tourism strategies, which positively affect business results. The basis of the scientists' research (Jahid J., 2019) is a descriptive and correlational analysis of the support of the local community in the implementation of green policy for the development of sustainable green tourism. The authors (Abdulaali H.S. et al., 2019) investigated the barriers that hotel owners face when implementing ecological and green tourism in the context of sustainable development. Within the scope of the article (Misso R. et al., 2018), the authors consider the specifics of the development of green tourism through the principles and political prescriptions that contribute to the development and protection of the environment, as well as the scientists analyzed how important green tourism is for maintaining and improving the position of the EU in world tourism. The study of scientists (Aldous D.E., 2013), which examines the problems faced by green tourism and proposes ways to solve them in the context of sustainable development, deserves attention.

However, despite the significant number of publications in this direction of research, the issue of green tourism as a component of sustainable development of regions is gaining more and more relevance and requires further research and analysis.

Methodical approach

This scientific work is based on such general scientific, specific and economic methods as: analysis and synthesis, dialectical, systematization, induction and deduction, generalization, analytical, abstract logical (to clarify the elements of green tourism and justify the expediency of its identification with sustainable development); statistical and statistical analysis (for the formation of the objects of this study and the main indicators characterizing the state of their development in the field of rural green tourism); graphic (for a visual representation of the components, advantages and disadvantages of green tourism

as a component of sustainable development, its place in the system of sustainable development and its goals, as well as the algorithm for determining the level of development of rural green tourism); economic and mathematical modeling (to assess the level of the development of rural green tourism).

Taking into account the above, in this article it is necessary to pay attention to the research and assessment of the level of development of rural green tourism in the regional section and to group the regions according to this indicator.

For this purpose, we propose to apply the methodology, which consists of the sequential implementation of the following steps (Fig. 1).

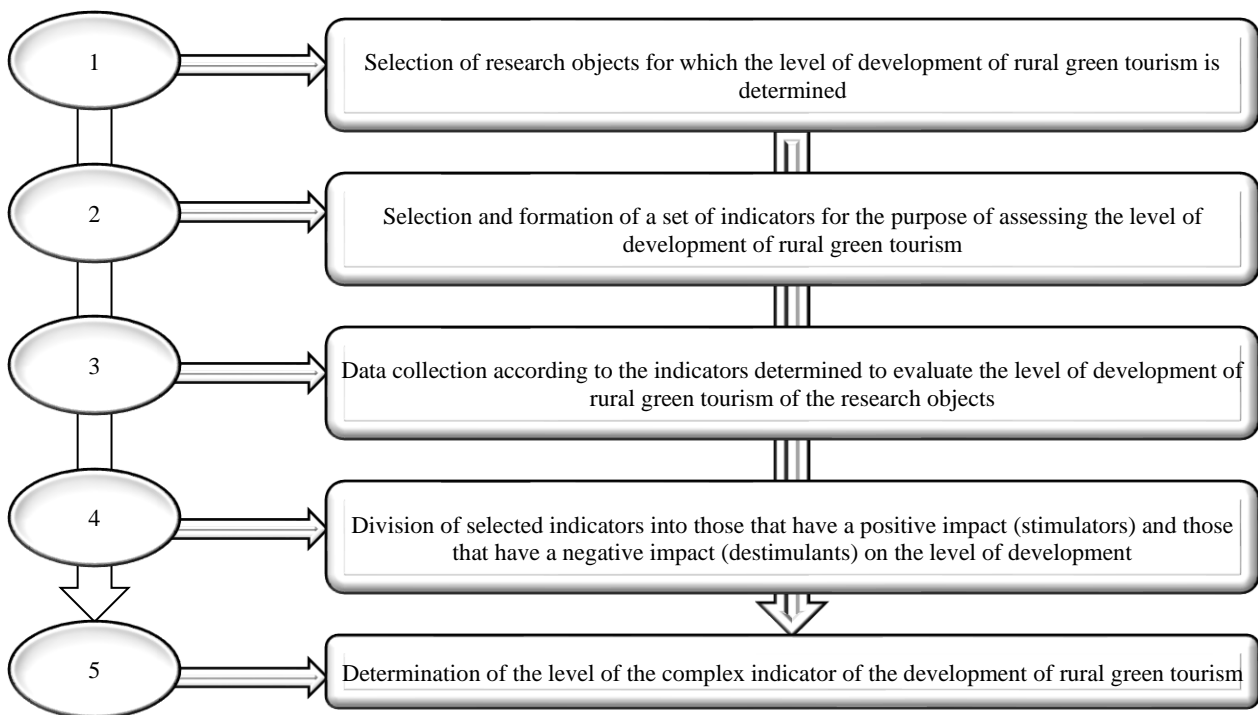


Figure 1. Algorithm for determining the level of development of rural green tourism

**Source: developed by the authors.*

Let's consider each of the stages (Fig. 1) in more detail. When implementing the first step, when choosing research objects, it should be noted that their determination is influenced by the presence of statistical information. In view of this, the following regions of Ukraine will be the objects of the study: Vinnytsia, Volyn, Dnipropetrovsk, Zakarpattia,

Zaporizhzhya, Ivano-Frankivsk, Kirovohrad, Lviv, Odesa, Poltava, Ternopil, Kharkiv, Kherson, Khmelnytskyi, Cherkasy, Chernivtsi and Chernihiv.

At the second step, when forming a system of indicators that determine the level of development of rural green tourism, we offer the following evaluation parameters: number

of homesteads per 100,000 population; the share of rural estates in the accommodation of tourists; the number of accommodated persons per 100,000 population; the total area of estates relative to the area of the region; income from services provided per 100,000 population; cost indices; capacity utilization rate of collective means of accommodation.

The third step of this algorithm consists in the formation of initial data based on statistical information for the application of further steps of the procedure proposed by the author.

The fourth step of the proposed methodology for determining the level of rural green tourism involves the application of formula (1) for indicators of stimulants:

$$T_{is} = \frac{T_f}{T_{\max}}, \quad (1)$$

where T_{is} – the level of development according to the i -th indicator of the stimulator;

T_f – actual value of the rural green tourism indicator;

T_{\max} – the maximum value of the rural green tourism indicator;

or formula (2) for indicators of destimulators:

$$T_{id} = \frac{T_{\min}}{T_f}, \quad (2)$$

T_{id} – the level of development of rural green tourism according to the i -th destimulator indicator;

T_{\min} – the minimum value of the rural green tourism indicator.

In the fifth step, the complex indicator of rural green tourism is determined using the following formula:

$$RGT_j = \sqrt[n]{\sum_{p=1}^n M_{ij}}, \quad (3)$$

M_{ij} – standardized indicator of rural green tourism for j -region;

n – the number of indicators that are studied.

Results

In the modern conditions of Ukraine's integration into the European and world space and cooperation, the creation of such forms of optimization of economic relations, which are aimed at the effective realization of potentials, such as natural, labor, recreational, etc., is becoming an urgent and priority direction, the leading component of which structure is tourism field in general, and rural green tourism in particular. Ukraine has all the conditions for the development of rural green tourism on its territory: firstly, it is a good geographical location; secondly, a favorable climate; thirdly, there is a rich natural potential (various landscape complexes and natural areas) and recreational potential (historical cultural monuments, traditional and ethnic achievements, etc.); the presence of powerful labor and land resources. Rural green tourism is a leading component of the sustainable development of the region (Fig. 2).

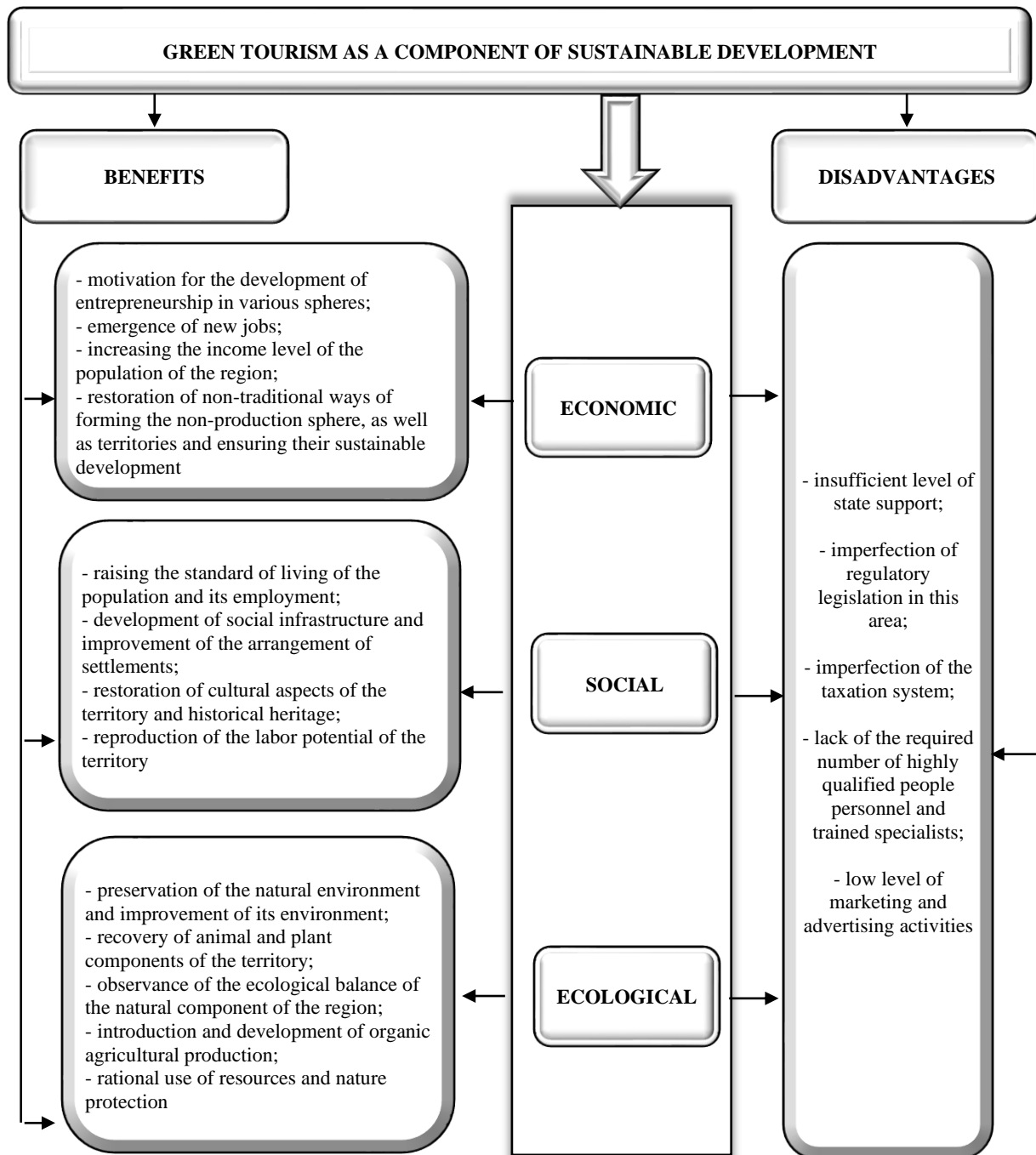


Figure 2. Green tourism as a component of sustainable development of the region

**Source: systematized by the authors.*

Given the fact that the main task of green tourism is to ensure the maximum number of natural resources and cultural values intact and intact, it is absolutely appropriate to identify green tourism with sustainable development (Fig. 3). Sustainable tourism is able to meet the needs of tourists and regions, and allows to protect and increase opportunities for

posterity. In the process of carrying out tourist activities, the rational use of resources is ensured, which, on the one hand, allows satisfying the needs of consumers (economic, social, etc.), and on the other hand, preserves cultural heritage and values, the life support system, and the necessary ecological processes.

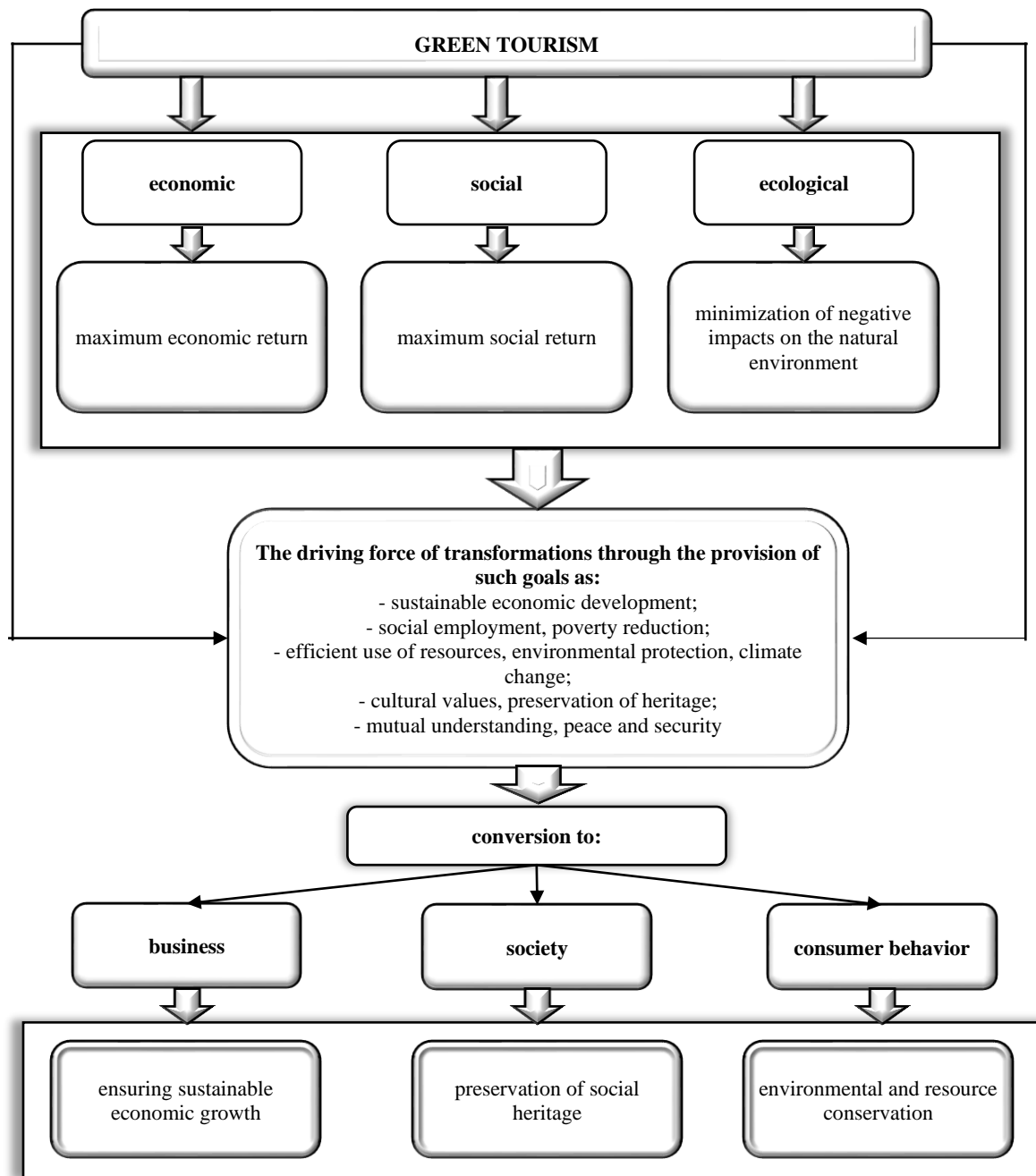


Figure 3. Green tourism in the system of sustainable development and its goals

**Source: systematized by the authors.*

The successful functioning and development of rural green tourism contributes to the solution of a complex of economic, social and environmental problems in terms of increasing the employment of the rural population, the level of its quality of life, creating the reproduction of human potential in the agricultural sphere, the creation of the latest trends in agricultural production and the sale of its products, increasing the level of profitability of agricultural producers, the

formation and increase of revenues to local budgets, increasing the level of settlement of settlements, preservation, restoration and development of natural potential, the introduction of resource-saving technologies, optimal and rational use natural resources. At the same time, scaling up the tourism sector will in turn have an extremely positive impact on the development of other economic activities, in particular, trade, transport, entertainment and other infrastructure

elements, accelerating the development of rural areas.

The definition of the level of development of rural green tourism according to the indicators defined in the methodology,

calculated according to formulas (1) and (2), is given in Table 1. Using formula (3), we calculate a comprehensive indicator of the development of rural green tourism (Fig. 4).

Table 1. Indicators of the level of rural green tourism development and ranking of regions according to a complex indicator

Region	number of estates per 100,000 population	the share of rural estates in the accommodation of tourists	number of accommodated persons per 100,000 population	the total area of estates relative to the area of the region	income from services provided per 100,000 population	cost indices	capacity utilization rate of collective means of accommodation	Complex indicator of rural green tourism	Rank
Vinnitsia	0,51	0,53	0,41	0,43	0,51	0,98	0,76	2,03	13
Volynsk	0,57	0,59	0,77	0,63	0,82	0,62	1,00	2,24	4
Dnipropetrovsk	0,51	0,49	0,45	0,53	0,49	0,95	0,40	1,95	15
Zakarpattia	0,65	0,66	0,71	0,73	0,93	0,57	0,45	2,17	5
Zaporizhzhia	0,51	0,48	0,33	0,39	0,60	1,00	0,43	1,93	17
Ivano-Frankivsk	1,00	1,00	1,00	1,00	1,00	0,59	0,39	2,45	1
Kirovohradsk	0,57	0,55	0,61	0,91	0,68	0,83	0,48	2,15	7
Lviv	0,95	0,96	0,92	0,85	0,91	0,57	0,51	2,38	2
Odesa	0,63	0,61	0,67	0,66	0,73	0,78	0,43	2,12	10
Poltava	0,53	0,55	0,48	0,53	0,63	0,76	0,40	1,97	14
Ternopilsk	0,55	0,59	0,73	0,59	0,64	0,73	0,57	2,09	11
Kharkivska	0,57	0,61	0,55	0,74	0,67	0,71	0,41	2,06	12
Khersonsk	0,51	0,53	0,50	0,56	0,66	0,79	1,00	2,13	9
Khmelnyska	0,59	0,62	0,83	0,69	0,82	0,64	0,47	2,16	6
Cherkassy	0,66	0,67	0,52	0,61	0,65	0,88	0,59	2,14	8
Chernivtsi	0,78	0,75	0,85	0,78	0,79	0,73	0,43	2,26	3
Chernihivska	0,51	0,53	0,45	0,49	0,53	0,93	0,51	1,99	16

*Source: calculated by the authors based on <https://www.ukrstat.gov.ua/>

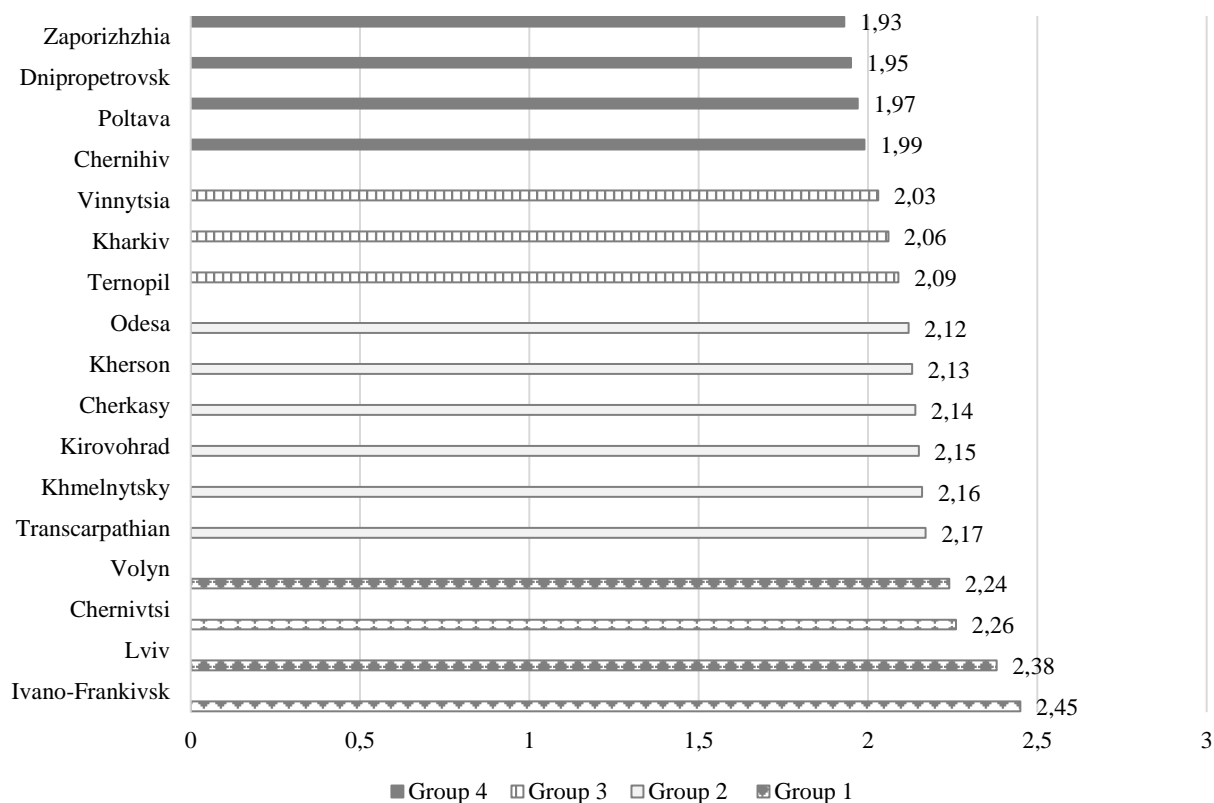


Figure 4. Value of a complex indicator of rural green tourism development in regions of Ukraine

*Source: calculated by the authors based on <https://www.ukrstat.gov.ua/>

The obtained results (Table 1, Fig. 4) made it possible to divide the regions of Ukraine into four groups, which made it possible to reveal the asymmetry of the development of rural green tourism in the regions.

The first group represents the leading regions (Ivano-Frankivsk, Lviv, Chernivtsi and Volhynia regions), which are characterized by high indicators of the development of rural green tourism. In view of this, for the regions of the first group, it should be recommended to apply mechanisms for further support of the achieved level in order to prevent its decrease.

The regions of the second group (with an above-average level of rural green tourism development - Zakarpattia, Khmelnytskyi, Kirovohrad, Cherkasy, Kherson, Odesa) are characterized by insufficient and incomplete use of their existing potential, which indicates the need to address this issue.

The third group of regions (Ternopil, Kharkiv and Vinnitsia) represents areas with

an average level of development of rural green tourism, for which it is necessary to take measures to activate this sphere of activity.

The fourth group included Chernihiv, Poltava, Dnipropetrovsk, and Zaporizhzhia regions (regions with a low level of development of rural green tourism), the components of the complex indicator of which have the lowest values, and therefore require significant efforts and investments for the development of green tourism, which can be attracted by the union of joint actions of the state, communities and business.

Conclusions

Green tourism is a type of economic activity that needs to be given considerable attention in our country, as it has a strong potential for raising the rural economy through the creation of new jobs, an increase in the amount of taxes to the budget, and the activation of the use of local resources.

Green tourism is becoming popular in conditions of a permanent lack of economic

stability in the country due to the influence of rapidly changing environmental factors. Strategies for the development of the social, economic and ecological spheres increase the importance of this type of economic activity as one of the important spheres of life. Reforming Ukraine in terms of the transition to decentralization processes, and therefore self-sufficiency should be considered a motivating factor for increasing the level of efficiency of the development of the economic system of rural areas based on green tourism and local resources. Green tourism in modern conditions

contributes to the well-being of the rural population and is considered as a priority direction for the diversification of the rural economic system and a component of the sustainable development of the region.

The strategy for the development of green tourism requires the creation of such conditions that would meet the goals of sustainable development. The prospect of further research will be the development of mechanisms for the activation of green tourism development processes and tools for their implementation at the regional level.

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References

- Abdulaali, H.S., Usman, I.M.S., Al-Ruwaishedi, Mais R.K. (2019). A review on sustainable and green development in the tourism and hotel industry in Malaysia. *Journal of Advanced Research in Dynamical and Control Systems*, 11(10), 854-867. DOI: 10.5373/JARDCS/V11SP10/20192881.
- Aldous, D.E. (2013). Effects of green tourism on sustainable development. *Acta Horticulturae*, 999, 171-178. DOI: 10.17660/ActaHortic.2013.999.23.
- Jahid J. (2019). The implementation of green policy towards the development of sustainable green tourism village at Bone-Bone, Enrekang, South Sulawesi. *AIP Conference Proceedings*, 212, 0400. DOI: 10.1063/1.5115652.
- Li, X. (2022). Green Innovation Behavior Toward Sustainable Tourism Development: A Dual Mediation Model. *Frontiers in Psychology*, 1310, 930973. DOI: 10.3389/fpsyg.2022.930973.
- Misso, R., Andreopoulou, Z., Cesaretti, G.P., Hanna, S.S., Tzoulis, I. (2018). Sustainable development and green tourism: New practices for excellence in the digital era. *Journal for International Business and Entrepreneurship Development*, 11(1), 65-74. DOI: 10.1504/JIBED.2018.090035.
- Nguyen, H.P., Bui, V.D. (2021). Green Marketing Strategy as a Sustainable Solution to Tourism Development in Vietnam. *Webology*, 18, 116-132. DOI: 10.14704/WEB/V18SI04/WEB18118.
- Yousaf, Z., Radulescu, M., Sinisi, C.I., Serbanescu, L., Paunescu, L.M. (2021). Harmonization of green motives and green business strategies towards sustainable development of hospitality and tourism industry: Green environmental policies. *Sustainability*, 13(122), 6592. DOI: 10.3390/su13126592.