

STATE UNIVERSITY OF LAND USE PLANNING -A DRIVER OF ECOLOGICAL DEVELOPMENT OF SMALL REGIONS IN THE CONDITIONS OF COVID-19



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Abstract

The paper shows the features of the implementation of measures related to the environmentally sustainable development of small regions within the framework of educational field and production practices in the conditions of COVID-19, the experience of conducting a comprehensive geoecological assessment of the Osetr river basin in the period 2015-2021, agroecological assessment with subsequent analysis of the state of agroecosystems based on the results of systematic regular observations for the rational use and protection of landscapes on the territory of the SEB "Gornoye", the need for the development of ecological educational tourism is noted in connection with the active development of the tourism industry, which is accompanied by an increase in the anthropogenic load on the environment.

Keywords: geoecology, sustainable ecological development, field practices, ecological tourism, recreation

Nº	Nº NATURAL BLOCK								
п/п*			Score scale						
				16	26	36	4б	56	
	Component of the bioclimate assessment k=1								
1	1 Duration of sunshine h / year				≥1700	≥1800	≥1900	≥2000	
2	2 Average annual precipitation, mm per year			≥700	≤700	≤600	≤500	≤400	
3	3 The average duration of the frost-free period, days.				≥160	≥170	≥180	≥190	
4	4 Average annual wind speed m / s			≥7,1	≤7	≤5	≤3	≤2	
5	5 The duration of the summer comfort period with t≥15°C				≥40	≥50	≥60	≥70	
Nº	Natural	Historical	Socio-	Tourist	The block	Enviro	onm	Total	
	block	and	economic	block	of	enta	al	points	
		cultural	block		negative	situat	ion		
		block			factors				
1 RZ	109	36	24	14	19	5		159	
2 RZ	108	58	20	11	21	5		171	
3 RZ	104,5	46	22	11	17	5		161,5	
4 RZ	107,5	38	15	12	22	5		145,5	
5 RZ	105	35	41	14	21	9		165	
6 RZ	96,5	39,5	28	11	23	6		146	
7 RZ	103,5	35	41	14	21	9		163,5	
8 RZ	106,5	53,5	16	11	23	6		158	
9 RZ	117	49	40	14	21	7		192	
10 R7	122	30.5	15	10	18	4		155.5	
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Total points	Evaluation
< 100	Low
100-150	Relatively low
150-250	Average
250-300	Relatively high
> 300	High



gions is the development of ecological educational tourism as part of educational field and industrial practices in 2020. Based on the main provisions of the developed methodology presented in the work, a comprehensive assessment of the recreational zones of the Osetr river basin gives a general idea of the tourist and recreational potential of the studied territories and possible ways of organizing forms of ecotourism in these territories. One of the important results of the environmentally sustainable development of small regions is the development of ecological educational tourism within the framework of training field and production practices in 2020. I.V. Rozhkov (2020,2021) based on the methods of water balance by L.D. Armand (1975), the assessment of the tourist potential of E.Yu. Kolbovsky (2006) and the calculation of the tourist and recreational potential of M.V. Gudkovskikh (2017), the results of assessing the anthropogenic impact on recreational zones (Shirokova, Shirokov, Khutorova et al., 2018) and the ecological state of water bodies for recreation (Golovatyuk, Shirokova, 2019) in the period 2015-2020: -considered the most important geoecological approaches to the study of the tourist and recreational potential of the territory using the example of the Osetr river basin with the subsequent development of a methodology for a comprehensive assessment of the recreational zones of the Osetr river basin, the allocation of recreational areas and the assessment of the recreational load and capacity of the natural-tourist complex and the creation of an interactive schematic map of the recreational potential of the Osetr river basin; - carried out the assessment of the recreational load and capacity of the natural and tourist potential, the recreational suitability of the catchment area of the Osetr River in accordance with the main provisions of the developed methodology for five blocks according to the criteria of the method of E.Yu. Kolbovsky and M.V. Gudkovskikh - natural, cultural, historical, socio-economic, tourist and a block of unfavorable factors for 10 recreational zones : the holy spring "White Well" - 192 points; Venev-Nikolsky monastery - 172 points; Boat station "Elling" - 165 points; dam in the city of Zaraysk - 163.5 points; Guryev quarries - 161.5 points; tourist center "Saturn" - 159 points; wellspring "12 keys" - 158 points; broad-leaved forest in the bend of the Osetr river - 155.5 points; the dam in the urban-type settlement Serebryanye Prudy - 146 points; Livadiyskaya HPP - 145.5 points. The results of assessing the tourist and recreational potential for the development of ecological tourism on the basis of the methods and approaches proposed in the work for processing and analyzing the data obtained will form the basis for creating a geoecological passport for the catchment area of the Osetr river basin. The developments of the Department of Soil Science, Ecology and Nature Management, materials of field observations and research of students and postgraduates, individual stories from published sources will be included in research papers, diplomas, master's theses, articles, textbooks, teaching aids, monographs in the direction of "Ecology and Nature Management" and "Geoecology".

Figure 1. Stages of formation of the assessment of tourist and recreational potential

References

[1]Yurova, Yu.D., Shirokova, V.A., Khutorova, A.O. 2020. Gornoye research and academic base of the State University for Land Management as a foundation for the training of environmental specialists. In: Green University-University of the 21st century / Master Po Nur-Sultan LLP, Kazakhstan, pp. 39-42

[2]Nekrich, A.S. 2021. Formation of geographic thinking when conducting field training practices in a pandemic. Collection of abstracts of the participants of scientific and practical conferences, edited by E. P. Masyutkina / KGMTU, Kerch, pp. 549-551

[3]Tenkebaeva, Zh.F., Erzhanova, Zh.S. 2020. Organization of field work for students of the specialty "6B05209-Geography" ENU named by L.N. Gumilyov in the context of distance learning. Innovative aspects of the development of science and technology, No. 2, pp. 207-219

[4]Rozhkov, I. V. 2021. Assessment of the recreational potential of the Osetr river basin. GUZ, Moscow 70 p.

[5]Zhuravkova, L.A, Rozhkov, I.V, Shirokov, R.S., Yurova, Yu.D. 2020. Geoecological monitoring on the territory of NUB "Gornoye" of the Zaraysky District of the Moscow Region. Environmental Control Systems - 2020 / IP Kulikov A.S, Sevastopol, P.78

[6]Armand, D.L. 1975. Landscape Science. Fundamentals of theory and logic-mathematical methods. Mysl', Moscow, 287 p

[7]Kolbovsky, E.Yu. 2011. Ecological tourism and ecology of tourism. Academy, Moscow, 256 p [8]Gudkovsky, M.V. 2017. Methodology of integrated assessment of tourist and recreational potential. Geographical newspaper, Volume 1(40), pp. 102-116

[9]Shirokova, V.A., Shirokov, R.S., Khutorova, A.O., Gurov, A.F., Yurova, Y.D. 2018. Environmental assessment of anthropogenic effects on recreation zones: Osetr river in the Moscow region. Proceedings - 2018 Baltic Geodetic Congress, BGC-Geomatics, Volume 8453689, pp. 181-185

[10]Golovatyuk, S.A., Shirokova, V.A. 2019. Ecological assessment of the suitability of the Osetr River for recreation. Natural Resource Management, GIS & Remote Sensing, Volume 1 (2), pp. 1-8 [11]Yurova, Y.D., Shirokova, V.A. 2021. Geoecological screening of the state of small and medium-







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