

# 18. Educating students in the organization and management of ecological tourism in the forests of Belarus

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## Introduction

Ecotourism in the Republic of Belarus is a relatively young, but already popular tourism destination with a high potential for development, especially on the lands of the forest fund. This is due to the high forest cover of the territory of the Republic (about 40%), the presence of a large number of significant environmentally protected sites. Among them are the National parks “Belovezhskaya Pushcha”, “Braslav Lakes”, “Narochansky”, “Pripyatsky”, Berezinsky biosphere reserve, state forest reserve “Nalibokskaya Pushcha”, key biotopes, picturesque rivers, lakes and pristine swamps, very attractive for tourists, including foreign ones. Only specialists who have extensive comprehensive knowledge of special biological and environmental disciplines, in addition to competence in the field of tourism, can professionally give a tour or excursion to such destinations. This allows them to reveal the complex set of connections and processes occurring in forest ecosystems, and provide an accessible information to tourists. The interest in such specialists has been repeatedly expressed by the heads of specially protected natural areas (hereinafter SPNA), of some forestry institutions.

It should also be noted that due to the increased frequency and duration of adverse biotic and abiotic factors on forest ecosystems (epiphytosis, epizootics, climate change, hurricanes, fires) the value of standard natural sites has significantly increased and reinforced the interest in them.

All of the above made it necessary to train specialists in the field of ecological tourism with deep knowledge in the sphere of multipurpose forest management, fauna and flora, local history, organization and marketing of ecotourism, service, psychology, foreign language, economics and law. It was organized at the Forestry Faculty of BSTU in 2009 in the framework of a separate speciality of the I stage of higher education (bachelor's degree) “Tourism and nature management”.

## Peculiarities of preparation of specialists in tourism and nature management

Educating students in the specialty is carried out according to innovative technologies, including the modular-rating principle of organization of studies, with the usage of modern multimedia and laboratory equipment, the systematic monitoring of students' knowledge with the help computer technologies, etc.

The curriculum of the specialty "Tourism and nature management" covers a wide range of disciplines: international tourism, information technologies in ecotourism, regional geography and local history, ethnographic tourism resources, tourist guidance, hotel and restaurant business, bases of tourist service, tourist and recreation activities with the nutritional basics, promotional activities, fundamentals of standardization and certification in tourism, planning and tourism, water resources and tourism, tour operating, technology and organization of excursion services, planning and organization of ecological tourism, technology and organization of hunting tourism, ecological management, landscape design and organization of sites of ecological tourism, photo and video art, ecology with the basics of energy saving and hygiene. The educational programmes of these disciplines reflect the international and domestic experience of scientific research and practical developments in the field of ecological tourism.

It should be emphasized that while preparing in the specialty "Tourism and nature management", unlike the training in the specialty "Tourism and hospitality" that was opened earlier in some of our educational institutions, the emphasis is made on subjects related, in a broad sense, to the study of nature. For example, students study such subjects as: general biology – 160 hours; entomology and mycology – 301 hours; landscape studies with the basics of soil science – 70 hours; floristic resources of ecological tourism – 220 hours; faunistic resources of ecological tourism – 175 hours; forestry and bogland science – 163 hours; hunting and hunting sector – 230 hours; non-timber forest resources with the basics of beekeeping and fish farming – 210 hours; technology and organization of hunting tourism – 180 hours; landscape design and organization of sites of ecological tourism – 140 hours, etc.

The curriculum includes in-depth study of foreign languages by students for the possibility to communicate with foreign tourist organizations and tourists. Thus, the allotted time for the study of the discipline "Foreign language" is 120 hours, "Foreign language (speaking practice)" – 250 hours, "Foreign business language" – 305 hours.

Practical training and connection with production are important components of the educational process. Approximately one quarter of the time (24%) allocated for training, students spend on educational, industrial technological and pre-graduation practical training. So, after each course students pass training practices on the basis of the Negoreloe forestry experimental station, national parks "Braslav Lakes", "Pripyatsky", the reserve of republican value "Naliboksky", the central botanical garden of NAS of Belarus, etc. (Figures 18.1-18.2).



FIGURE 18.1. The campus of the Negoreloe forestry experimental station

SOURCE: archive of the Forestry Faculty.



FIGURE 18.2. Practice in water resources and tourism

SOURCE: archive of the Forestry Faculty.

Industrial practice for students takes place on the basis of protected areas, tourist companies, forestry institutions. On the basis of the collected material, students develop diploma projects and works of practical importance. Many of them were introduced into production and became widely known in tourist circles. For example, the Center of mythological tourism in the Berezinsky biosphere reserve was created on the basis of the thesis of the student E. V. Sidorenko, the script of the regional festival with the participation of guests from Poland “Under the auspices of St. Hubert”, held in 2016 on the Augustow canal, was also originally worked out in the thesis of the graduate P. E. Liger and others.

The basic Department providing training of students of the speciality is the Department of tourism, nature management and hunting. Among its teaching staff are highly qualified specialists: 1 Doctor of Biological Sciences and 12 candidates of sciences of various fields:

biological, geographical, agricultural, medical, economic, art history, veterinary. For the last few years training manuals for students of the speciality which have no analogues in Belarus, by the teaching staff of the Department were published. They include, for example, “Faunal resources of ecological tourism”<sup>1</sup>, “Floristic resources of ecological tourism”<sup>2</sup>, “Forest science and bog science”<sup>3</sup>, “Fish farming”<sup>4</sup>, “Mycology”<sup>5</sup>, etc. In the arboretum of the Negoreloe forestry experimental station, an ecological trail “The Tale of the Negorelsky Forest” has been developed and created, where students of this speciality can practise, give excursions for schoolchildren, students and all those who wish to participate. The materials underlying the creation of this ecological trail are published in the monograph of the same name<sup>6</sup>.



FIGURE 18.3. In the biology classroom of forest animals and birds

SOURCE: archive of the Forestry Faculty.

- <sup>1</sup> A. I. Roukach, *Faunal resources of ecological tourism: a manual for students of higher education institutions in the specialty 1-89 02 02 “Tourism and nature management”*, Belarusian State Technological University, Minsk 2012, p. 289.
- <sup>2</sup> Ya. A. Shaparava, *Floristic resources of ecological tourism. Workshop: training method. manual for students of higher education institutions in the specialty 1-89 02 02 “Tourism and nature management”*, Belarusian State Technological University, Minsk 2015, p. 208.
- <sup>3</sup> A. U. Marozau, K. V. Labokha, A. S. Klysh, *Forest science and bog science: training method. manual for students of higher education institutions in the specialty 1-89 02 02 “Tourism and nature management”*, Belarusian State Technological University, Minsk 2015, p. 326.
- <sup>4</sup> V. M. Kaplich, V. B. Zvyagintsau, V. A. Gerasimchik, *Fish farming: a textbook*, Information Center of the Ministry of Finance, Minsk 2016, p. 366.
- <sup>5</sup> Ya. A. Shaparava, *Mycology. Workshop: training method. manual for students of the specialty 1-89 02 02 “Tourism and nature management”*, Belarusian State Technological University, Minsk 2018, p. 217.
- <sup>6</sup> Ya. A. Shaparava, N. I. Zdanovich, V. M. Kaplich, A. U. Bakhur, *Ecological educational trail “The Tale of the Negorelsky Forest”* – Minsk: BSTU 2017, p. 167.

In various years for the final certification as chairmen of the commissions for the defence of diploma theses of students of the speciality were involved: honorary Director of the Institute of experimental botany named in honor of V. F. Kuprevich academician V. I. Parfenov, former Deputy Minister of natural resources and environmental protection of the Republic of Belarus I. M. Kochanovsky (during his tenure), now Deputy Minister of natural resources and environmental protection A. N. Korbut.

The Department of tourism, nature management and hunting has the appropriate tourist equipment, modern equipped laboratories for photo and video art, ethnography and excursion and tourist activities, floristic resources, fish farming, non-timber forest resources, biology of forest animals and birds, etc. (Figure 18.3).

## The contingent and graduates

The speciality “Tourism and nature management” enjoys stable demand among applicants, as evidenced in the annual implementation of the enrollment plan, both for budget and paid forms of education. For example, in 2018, the competition for this speciality (with funding from the national budget) in BSTU was about 4 people for 1 place. Over the past few years, the Ministry of education of the Republic of Belarus has approved the enrollment plan for this specialty with 23 people for studying funded from the republican budget and 17 students self-funding. Studying is carried out exclusively in full-time form.

To enter the speciality, applicants provide the admission committee with a document on secondary or secondary specialized education, certificates of centralized testing in biology and language (Russian or Belarusian), and then pass an internal exam in the form of practical tests in physical culture and sports. Scores on the education document, certificates and exam are summed up. Applicants with the highest scores are enrolled for studying. The duration of study for the speciality was originally 4.5 years then reduced to 4 years.

Students who have successfully mastered the educational program receive the qualification “Specialist in tourism and nature management”. From 2009 to 2019 from BSTU there were 7 specialist graduations in tourism and nature management with a total number of 327 people. Information over the past 5 years on the number who entered for the specialty “Tourism and nature management”, completed and were expelled is presented in Table 18.1.

TABLE 18.1. The number of entered for the specialty, graduated, and expelled for 2015-2019

Indicators	Years of graduation of students					Total
	2015	2016	2017	2018	2019	
Graduation						–
	39	58	122	44	35	298
Entered the 1st course	65	75	138	55	55	388
Percent of the graduates	60,0	77,3	88,4	80,0	63,6	76,8
The dropout rate	40,0	22,7	11,6	20,0	36,4	23,2

SOURCE: elaboration of co-authors.

TABLE 18.2. Distribution structure of graduates studying funded by the republican budget over the past 5 years, (%)

Years	Managing subjects:			
	environmental institutions	forestry institutions	tourist companies	educational institutions and others
2015	42,9	33,3	9,5	14,3
2016	11,5	19,2	42,3	26,9
2017	26,8	23,2	32,1	17,9
2018	6,9	24,1	55,2	13,8
2019	30,4	17,4	21,7	30,4

SOURCE: elaboration of co-authors.

As can be seen, the average percentage of expelled is 23.2. This is the lowest indicator at the Forestry Faculty and one of the lowest at the Belarusian State Technological University. Since the level of education at the faculty and the university is approximately the same, we interpret this fact as evidence of the high motivation of students to study.

The main customers of specialists in tourism and nature management are the office of the President of the Republic of Belarus and the Ministry of forestry of the Republic of Belarus. All graduates find their first job according to their speciality and are

distributed to environmental institutions (reserves, national parks), forestry institutions with unique natural objects, as well as tourist companies engaged in the organization of ecological tourism by nature management (Table 18.2).

## Research work

Every year, students of the speciality “Tourism and nature management” are involved in the implementation of research work in the framework of the scientific club on photo and video art, as well as in the creative associations “Ecological tourism” and “Modern hunting”. The most common areas of research is an assessment of the state and studying of the prospects for the development of ecological, hunting and other tourism directions. Considerable attention is paid to the study of the peculiarities of the demand formation from potential customers for such types of tourism as event, historical, ethnographic. The study of monuments of historical and cultural heritage of various regions and regions as potential excursion objects is carried out. The possibility of using elements of traditional culture in excursion activities is investigated. Useful species of wild plants are determined and taken into account, biological and operational stocks of edible species of fungi are estimated, the main problems of the landscape are analyzed, etc.

Almost all course work, as well as graduate work (diploma/degree thesis) includes a fairly large research part. For example, students prepare programs for the organization of festivals for the target audience, projects of ecological trails and landscaping of agricultural estates. They plan activities for the protection of wild animals and wild plants, mushrooms. They develop technologies for involving natural and cultural-historical heritage objects in agrotourism business.

Students report the results of research work at the annual conferences of students, master’s degree candidates, postgraduate students, scientific and technical conferences of the teaching staff of BSTU<sup>7,8</sup>. The best works are published in public sources and also abroad<sup>9,10</sup>.

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<sup>7</sup> 69th scientific and technical conference of pupils, students and masters, April 2-13 [Electronic resource], Part 1, Belarusian State Technological University, Minsk 2018, p. 344.

<sup>8</sup> Forestry: materials of the 83rd scientific conference of teachers, researchers and graduate students (with international participation), February 04-14 [Electronic resource], Belarusian State Technological University, Minsk 2019, p. 188.

<sup>9</sup> T. S. Priszczepa, A. U. Marozau, *Flora mszaków z kompleksu leśno-błotno-jeziornego „Bezdonnica”*, „Prace Białoruskiego Państwowego Uniwersytetu Technologicznego. Seria I, Leśnictwo” 2016, no. 1(183), p. 52-55.

<sup>10</sup> A. U. Marozau, T. Priszczepa, *Bunkier na granicy sowiecko-polskiej z 1939 roku i jego cechy jako obiektu biologicznego w obecnym czasie. Turystyka na obszarach przyrodniczo cennych*, Białystok 2016, p. 103-112.

## Conclusion

The practical need of economic entities engaged in the integrated development of ecological tourism in Belarus led to the opening of “Tourism and nature management” speciality of the I stage of higher education (bachelor) at the forestry faculty of BSTU. The University has all the necessary prerequisites for the high-quality training of specialists in tourism and nature management. During the existence of the speciality (since 2009), it has produced more than 320 specialists who are able to organize tourist activities on the basis of natural objects at a high level. Graduates of BSTU have already shown themselves as competent highly qualified specialists, so they are in demand in tourist, environmental and forestry institutions of the country.

## Summary

The Republic of Belarus has significant potential for the development of ecological tourism in forests. This is due to the large area of forest areas and the presence of a large number of significant nature protection facilities. There is a need to develop this rather attractive type of tourism and the requirements for the preparation of specialists with competence not only in the field of tourism management, but also knowledge of special biological and ecological disciplines. In 2009, a new specialty “Tourism and use of nature” was opened at the Forestry Faculty of the Belarusian State Technological University. The study program includes various disciplines related to nature research, with the main focus being on forest areas. The university was organized and equipped with necessary specialized laboratories. In the Negoreloe forestry experimental station, which is a branch of the university, original ecological trails and paths were created, as well as other tourist facilities. Due to the high level of education, graduates in tourism and nature specialties are sought after in tourist offices, nature protection organizations, forest districts and other nature-related institutions.

**Key words:** ecotourism, forest areas, education

## Streszczenie

### Kształcenie studentów w zakresie organizacji i zarządzania turystyką ekologiczną w lasach Białorusi

Republika Białorusi posiada istotny potencjał w zakresie rozwoju turystyki ekologicznej w lasach. Wynika to ze znacznej powierzchni obszarów leśnych obecnych na jej terenie i dużej liczby znaczących chronionych obiektów przyrodniczych. Potrzebny jest rozwój tego atrakcyjnego rodzaju turystyki, a co za tym idzie – spełnienia wymagań w zakresie przygotowania specjalistów posiadających kompetencje nie tylko w kwestii zarządzania turystyką, ale także znajomości specjalistycznych dyscyplin biologicznych i ekologicznych. W 2009 roku na Wydziale Leśnym Białoruskiego Państwowego Uniwersytetu Technologicznego została otwarta nowa specjalność „Turystyka i korzystanie z przyrody”. Program tych studiów obejmuje różnorodne dyscypliny związane z badaniem przyrody, przy czym główny nacisk kładziony jest na obszary leśne. Uczelnię wyposażono również w niezbędne specjalistyczne laboratoria. W Nadleśnictwie Negorelskim, które jest filią uniwersytetu, utworzono oryginalne szlaki i ścieżki ekologiczne, a także inne obiekty turystyczne.



Ze względu na wysoki poziom kształcenia absolwenci specjalności są poszukiwani w biurach turystycznych, organizacjach zajmujących się ochroną przyrody, nadleśnictwach i innych instytucjach związanych z przyrodą.

**Słowa kluczowe:** ekoturystyka, obszary leśne, kształcenie

## Literature

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