

Radiation has always been a natural part of our environment. Natural radioactive sources in the soil, water and air contribute to our exposure to ionizing radiation, as well as man-made sources resulting from mining and use of naturally radioactive materials in power generation, nuclear medicine, consumer products, military and industrial applications.

There are three factors that control the amount, or dose, of radiation received from a source. Radiation exposure can be managed by a combination of these factors:

- **Time:** Reducing the time of an exposure reduces the effective dose proportionally.
- **Distance:** Increasing distance reduces dose due to the inverse square law.
- **Shielding:** The term 'biological shield' refers to a mass of absorbing material placed around a reactor, or other radioactive source, to reduce the radiation to a level safe for humans. Almost any material can act as a shield from gamma or x-rays if used in sufficient amounts.

## **METHOD FOR ESTHETIC APPEAL OF THE TERRITORY'S ASSESSMENT TO ECOLOGICAL TOURISM DEVELOPMENT**

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The valuation method for complex assessment of esthetic appeal of the recreation territory for ecological tourism development is offered in the work. The peculiarity of its application for Belarus is discussed.

*Keywords:* ecotourism, ecotouristic resources, score method of assessment.

Before the middle of the XX century the relationship between the human and the nature had complementary character. The rapid growth of population and, respectively, increasing in requirements of society in nature resource – became the course of decreasing carrying capacity of natural complex. Ecotourism is a form of tourism involving visiting relatively undisturbed natural areas, and means responsible travel to natural areas conserving the environment and improving the well-being of the local people [1]. Ecotourism has increasing popularity in Europe and Belarus the last decade. The problem of natural territories' carrying capacity assessment for their safe use is actual.

There is no uniform technique for assessment of the territory for justification of need of implementation of development of ecotourist projects within the natural protected territories in Republic of Belarus. The essential resources for sustainable ecotourism development as natural, as cultural and historical objects. Their needs be taken into consideration for territory assessment for introduction of ecotourist projects. Therefore the technique of complex assessment of resources of the territory for development of ecotourism is offered.

For assessment of natural capacity of the territory it is necessary to estimate two categories: environment and natural resources. Orographical, hydrological, bioclimatic, balneological characteristics belong to the category «environment». To category «natural resources» – landscape, floristic and faunistic resources.

Within the cultural and historical capacity of the territory categories are considered: the material objects of culture and non-material manifestations of creativity.

For estimation of floristic and faunistic resources it is possible to take the selection criteria of species of flora and fauna for excursion display recommended by specialists of Institute of zoology of National Academy of Sciences of Belarus as a basis:

1. the uniqueness of a look, that is this look can be seen only in the explored territory in Republic of Belarus;
2. the nature protection status of a look (the quantity of types of the international and national status of protection is counted);
3. stability of number – seasonal or constant existence of vegetable community (animal population) in the excursion territory – is a guarantor of inclusion of this object in an ecotour;
4. look attractiveness degree;
5. degree of a specific variety of vegetable communities, populations of representatives of fauna; represents a ratio of such indexes as quantity of types with stable number (quantity) and the areas of the administrative region in thousands of square kilometers.

One of the most important indexes at assessment of esthetic appeal of the territory to development of ecotourism is a landscape variety which technique of the characteristic following criteria are offered: index of the relative wealth; index of a landscape variegation; index of landscape complexity.

For assessment of the material objects of culture the following criteria were chosen:

1. density of objects of historical and cultural value on 100 thousand sq.km;
2. cultural significance of objects of historical and cultural heritage;
3. specific structure of objects of historical and cultural heritage.

As the quantitative indices of the offered criteria for assessment of ecotourist resources are various, for their comparison and deduction of a uniform index of usefulness of a combination of natural resources and cultural and historical capacity of the territory it is recommended to transform indicators to mark values. Will be also a three-stage scale of ranging of indexes enough.

For development of a technique of assessment of esthetic appeal of the territory to development of ecotourism methods of medicobiological and esthetic estimates were used.

The offered technique of assessment of esthetic appeal of the territory to development of ecotourism was approved at estimation of the Brest and Grodno regions in a section of administrative regions.

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## **ECOLOGICAL AND EPIDEMIOLOGICAL ASPECTS OF THE INCIDENCE OF MALIGNANT NEOPLASMS OF THE LUNG**

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In Belarus lung cancer is on the 1st place in the structure of cancer incidence. Lung cancer is a serious health and social problem in the developed countries it is the most common cancer and the most common cause of death from cancer. The focus is on two factors: the first factor – is to strengthen air pollution, the second important factor – the increase in tobacco use.

*Keywords:* lung cancer, overgrowth and gender dynamics, carcinogenic factors, harm of smoking, the effect of environmental factors on cancer

The object of the study was the official statistical indicators of the Belarusian Cancer Registry "Statistics of Oncological Diseases", the data of the European database on the incidence and mortality of the population of the Republic of Belarus from lung cancer in the period from 2002 to 2016.

The aim of the study is to study the epidemiological aspects of diseases of the population of the Republic of Belarus with lung cancer, as well as assess the medical and social significance of the problem in people's lives.

In the work, extensive rates of morbidity, rates of increase in morbidity, cumulative risk, prognostic index and relative epidemiological risk were calculated. Methods of system analysis and mathematical-statistical research methods were used for this[1, 2, 3].

As a result of a retrospective analysis of the incidence of malignant neoplasms in the lungs of the Republic of Belarus for the period from 2002 to 2016. we can draw the following conclusions:

- lung cancer occupies the first place in the structure of oncological morbidity; the number of men with lung cancer exceeds the number of sick women 9–10 times;
- for the period from 2002 to 2016 there was an unstable tendency to reduce the incidence of lung cancer in the Republic of Belarus ( $R^2 = 0.469$ );
- the peak incidence falls on the age group of 65–75 years, and the minimum incidence is among the 0–24 age group;
- the prevalence of smoking among adults has declined. In 2013 and 2014, per capita consumption began to decline significantly, for 2014 consumption was about 22.8 billion pieces per year, which is 12% less than in the previous year;
- during the studied period, there is a pronounced tendency to reduce the death rate of the population of the Republic of Belarus from lung cancer ( $R^2 = 0.9443$ );
- the degree of relative epidemiological risk for the population of the Republic of Belarus is moderate.
- changes in the cumulative index for the years of observation reflect a decrease in the risk of mortality. The average cumulative risk of death in men was 27.60%. The average cumulative risk of death in women was 2.25%;