

Assessment Of the Effect of Ecological Factors on The Human Organism in The Conditions of Northern Poland

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Abstract. The article evaluates the influence of environmental factors on the human organism in the conditions of Karakalpakstan. Among the ecological factors, various diseases appear in the human body as a result of the transfer of pollutant compounds to food products through air pollution, water resource pollution, and soil pollution. According to scientific sources, the incidence is high in Moynaq district.

Key words: factor, disease, pollution, organism, external environment.

Health care affects the duration and quality of life, its ability to work. The health of the population is one of the most important indicators of the well-being of society, and the health of the population defines the preservation and development of human potential as one of the main factors of development. Protecting the environment in the interests of protecting human health, in particular, reducing the negative effects of environmental harmful factors, remains the main task of biomedical research. At the same time, the main way of forming the strategic directions of ecological security and their implementation at the current stage is the development of management solutions for the optimization of the environment, living conditions and public health.

In the region of Karakalpakstan, great attention is being paid to the development of measures for the adaptation of the body of young adolescents to the adverse environmental factors of the external environment and the improvement of physical development indicators.

In our republic, great attention is paid to the implementation of comprehensive measures to study the physical development, morphofunctional state of the human organism and the mechanisms of its adaptation to the harmful factors of the environment. In this regard, among other things, measures were developed to improve the level of health of the population, to determine the mechanisms of adaptation of the organism to external environmental factors during the period of individual development [3]

Natural and climatic factors that affect the health of people and the population deserve special attention, because they also have a great impact on the quality of human health. Assessment of the impact of climate on all aspects of human life (economic, domestic, recreational) includes determining the quality of this resource, its size and regional differences, and the effectiveness of climate impact on human health and production.

There is evidence of a direct relationship between environmental pollution and allergies, lung bronchial diseases, disorders of neuropsychological and physical development [www.scienceforum.ru]. Negative demographic trends are evident, the frequency of all classes of diseases increases, and deviant cases and borderline disorders increase among young people.

It is legitimate to determine the relationship between the hygienic quality of the environment (air pollution, noise, quality of drinking water) and the indicator of general morbidity, because these relationships do not clearly affect the organism of various causal factors of low intensity.

The method of ecological analysis is widely used in the practice of environmental protection and public health protection in almost all foreign countries. For example, researchers often use statistical information about the health status of the population to establish a relationship between environmental factors and the health status of the population. For example, in Great Britain, this method is widely used in ecological practice [1].

Data on the health status (eg, lung cancer) of residents of a disadvantaged city are compared with lung cancer rates in the entire region that includes that city. In addition, they provide separate age-standardized indicators for men and women, and also take into account the distribution of the compared population on a socio-economic indicator (deprivation index) that reflects the influence of "interfering" factors. This indicator is calculated during the census, and each person can be assigned to a certain socio-economic group based on this

indicator. Thus, when conducting an environmental analysis, analysts try to eliminate the influence of "intervening" factors [1].

A comprehensive ecological approach to the analysis of patterns describing the relationship between environmental conditions and population health requires not only a quantitative assessment of changes occurring in the human body, but also a quantitative assessment of information about the state of the environment. We have collected numerical data showing that the clinical course of respiratory diseases is related to various exogenous factors: meteorological and heliogeophysical components, environmental pollution. Many experts have found that the causes that significantly increase the severity of the course and consequences of respiratory diseases include adverse climate and weather effects.

In the structure of the disease, special attention is paid to the growth of environmentally related diseases, such as diseases of the respiratory system, digestive system, and oncological pathology. Respiratory tract diseases occupy one of the leading places in the morbidity of the population of the Republic of Karakalpakstan: their contribution to the morbidity of the entire population is 38.9%, the children's population is 46.4% [3]. One of the reasons for the high increase in children's diseases in recent years may be the high level of air pollution in the South Aral Sea region [3].

The Republic of Karakalpakstan is distinguished by its territorial differentiation by districts. The highest percentages of registered patients are found mainly in the Southern regions of Karakalpakstan, slightly less in the North. For example, infectious and parasitic diseases prevail mainly in Muynoq district - 19.5%, Ellikkala, Beruniy and Turtkul districts (6.3, 7.5 and 8.4%, respectively) [2].

Currently, the most urgent problem of public health in the Republic of Karakalpakstan is the rapid growth of oncological diseases. Among the northern regions of the republic, Muynoq district has 29.7% of oncological diseases and Kungirotdistrict has 8.9%. This is the highest percentage of patients compared to other regions of Karakalpakstan and Uzbekistan in general.

Data analysis showed that the number of people registered with cancer was also in the Southern regions of Karakalpakstan: the total number of patients was 14.7% in Beruni, 8.5% in Turtkul.

Southern regions take the leading place in endocrine system diseases, eating disorders and metabolic diseases of the population. So, the number of such patients in Beruni district 19.6%, in Ellikkala - 16.3%, in Turtkul - 11.2% [2].

Indicators of regression statistics and analysis of variance (Tadjibaeva M.2021)

Settlements	Coefficients		Fisher's criterion, F	
	Multivariate correlation, R	determination, R ²	calculated F	The importance of Essence F
Northern districts	0,922	0,904	5,58	0,17
Central districts	0,94	0,925	12,69	0,08
Southern districts	0,931	0,91	6,08	0,09

Respiratory diseases are a special problem for healthcare in Karakalpakstan. Among respiratory diseases More than 85% are acute respiratory viral infections and acute respiratory diseases, the rest are pneumonia, chronic bronchitis, diseases of the tonsils and adenoids, and chronic pharyngitis [4].

Thus, the current extreme situation in the Aral Bay has a significant negative impact on the health of the population. In this regard, complex studies of a medical-biological and ecological nature are of particular importance. They make it possible to assess and determine the direct impact of the most negative environmental factors in the region on the health of the population, to determine the mechanisms of mobilization of the body's functional reserves, to determine the threshold state of health, to determine the risk factors for diseases, and to determine the causal factors that lead to various diseases among the population.

Finding these samples in the region will serve to organize targeted measures for health care, social protection, and to develop a set of measures to reduce the risk of common diseases and improve people's health

References

1. Абдиров Ч.А., Агаджанян Н.А., Северин А.Е. Экология и здоровье человека.- Нукус.- Каракалпакстан, 1993.- с. 43-45.
2. Атаназаров К.М., Чембарисов Э.И. Оценка здоровья детского населения и взаимосвязь с качеством воды для питьевого водоснабжения Республики Каракалпакстан // Материалы международной научно-практической конференции.- Нукус.- 2017.- с. 58-59.
3. Мамбетуллаева С.М. Анализ факторов, влияющих на состояние здоровья населения в условиях экологического кризиса в Южном Приаралье // Журн. International jurnal on Immunorehabilitation. -М., «Медицина –Здоровье», февраль,2004. -Том 6.- №1.- с.169
4. Нурабуллаева, Г. К., Ешчанова, С. Ш., & Даулетмуратова, Б. К. (2024, January). ОЦЕНКА СОСТОЯНИЯ ВОДНЫХ ЭКОСИСТЕМ И КРИТЕРИИ ОЦЕНКИ ИХ СОСТОЯНИЯ. In *INTERNATIONAL SCIENTIFIC RESEARCH CONFERENCE* (Vol. 2, No. 20, pp. 6-9).
5. Курбаниязов А.К., Чембарисов Э.И. Оценка результатов мониторинговых исследований грунтовых вод обсохшей части Аральского моря // Journal of Geography and Environmental Management. №2 (45) 2017.- С. 78-85.