

METHODS OF IMPROVEMENT AND ACTUAL PROBLEMS OF MODERN ECOLOGY IN UZBEKISTAN

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Abstract:

This article examines environmental problems in different regions of Uzbekistan and their solutions

Keywords: Ecology, Uzbekistan, population, environment, pollution, radiation, drinking water.

Introduction

The nature of the interaction of society with the environment has recently caused concern in wide circles of the public. The human environment is becoming increasingly polluted, and its ability to self-regulate is catastrophically declining. Diseases that were previously either not observed at all or were local in nature are becoming widespread. They are called "diseases of civilization".

Both the natural and social environments need protection and improvement. A person experiences a feeling of discomfort and gets sick both from a violation of the ecological balance in nature and from the pollution of the social environment.

The ecological state of the Republic of Uzbekistan is extremely worrying. The soil, air and water are polluted. Mineral extraction is irrational, nature is becoming impoverished. Nature also suffers from the intensive collection of forage, medicinal, edible herbs and shrubs. Intensive collection of raw materials, unregulated grazing, recreational load on landscapes lead to a reduction in the country's biomass reserves.





The level of environmental culture of the entire society plays an important role in preserving the natural environment and solving environmental problems. In order to form and develop environmental culture among the population, it is necessary to create a special methodology of environmental education, based on which and with the help of which people could control their actions and actively form an environmental culture.

An analysis of the real environmental situation in Uzbekistan shows that in the medium term - 10-15 years - a complex of new environmental problems may arise here in connection with this; the existing ones - the Aral crisis, water shortages, land degradation, deflation and soil erosion, the consequences of irrational use of natural resources and others - will worsen.

In the current economic conditions in the Republic, a tendency towards an "anti-ecological" nature of the development of the national economy has emerged. Intensive development of natural resources, oil, gas, non-ferrous and rare earth metals in the regions has led to the degradation of land and water resources, pollution of the air basin

Let's consider the polluted places today in the Republic of Uzbekistan.

The main polluter of the air basin of the Tashkent region is the Almalyk Mining and Metallurgical Plant (AGMK). Not to mention the mountains of slag polluting the surrounding area of this enterprise - the content of selenium, cadmium, phosphates in groundwater at a distance of 5 km from the dam of the AGMK tailings pond exceeds the maximum permissible concentration (MPC) by 8.3 times. In Almalyk there is a large lead halo near the Kalmakyr deposit (600-800 mg / kg). In the Akhangaran River valley, 3 km from the Angren coal deposit, a halo of soils contaminated with heavy metals (Cu, Pb, Zn, Fe, Ni) has formed. High concentrations of lead and cadmium are noted in the soil horizon. For example, in the cities of



Akhangaran and Angren they are 350-500 mg / kg, which exceeds the MPC by tens of times. Radionuclide contamination has been detected at uranium mining sites in Zafarabad (Kyzylkum), where the gamma radiation intensity ranges from 200 to 1500 $\mu\text{R}/\text{hour}$, reaching 2500-3000 $\mu\text{R}/\text{hour}$ in some places.



The source of radiation hazard is the tailings of the Navoi Mining and Metallurgical Plant (GMZ-1), located on the left bank of the Zarafshan River. The tailings area is 630 hectares, the dam height is 15 m. The radioactivity of the tailings reaches 90 kBq/kg, and the gamma field level on the tailings dams ranges from 300 to 500 $\mu\text{R}/\text{hour}$. An increase in groundwater mineralization with an increase in the concentration of SO_4 , chlorine, iron, selenium and manganese ions has been recorded. In the area of the city of Uchkuduk there is a warehouse of balance uranium ores with a volume of more than 3 million tons. The power of the exposure dose is 10-400 $\mu\text{R}/\text{hour}$. Summarizing all that has been said, the ecological situation in the Navoi region can be called critical.

Intensive development of gas and oil fields has led to large-scale land subsidence, which can affect not only changes in the landscape, the nature of the terrain, but also the dynamics of new and modern structures. The main environmental problem of the area is the supply of high-quality drinking water to the population. There are facts of groundwater pollution with phenols and oil products. The Kashkadarya River is polluted by the utilities of Karshi and Shakhrisabz, the mineralization of the water is up to 1220 mg / l, which exceeds the MAC by 1.2 times, and the content of oil products in it reaches 0.41 mg / l. An increase in the incidence of gallstones and urolithiasis among the population has been noted. Bukhara Oil Refinery is the main polluter of water resources in the area. The content of phenols and oil products in the water exceeds the



MAC by 2-3 times. High content of oil products in the soil is observed in the area of the village of Mubarek and on the territory of the Karaulbazar station. Fresh groundwater reserves are depleted, the region is experiencing a shortage of drinking water. Water mineralization is up to 1.5 g / l, and its hardness is 11-12 mg-eq.

Abandoned agricultural airfields, where organochlorine pesticides are still stored, including magnesium chlorate, which was used as a cotton defoliant, are also sources of environmental threats.

Water resources of the Zarafshan region are contaminated with heavy metals - waste from the uranium and gold mining industries. Increased levels of strontium, lead and zinc in water and soil are noted. In some places, increased levels of nitrates and pesticides in water and soil are noted, exceeding the MAC by 4-6 times. The supply of high-quality drinking water to the population is unsatisfactory.

Shortage of high-quality drinking water, problems with water supply to the population of rural areas. Land degradation due to swamping, soil pollution with nitrates and pesticides. The population mainly uses surface water for domestic needs, which contributes to the spread of acute gastrointestinal diseases.



Shortage of drinking water is an acute problem in the Bakhmal district of the Jizzakh region. In the vicinity of the village of Egizbulok in the Farish district, on an area of 5 hectares, there is a tailings pond for extremely toxic pesticides and pesticides

The most difficult area from an ecological point of view, where a number of problems are concentrated. The "leader" in terms of the amount of damage caused to the environment is the



oil and gas production and mining industries. Gas and oil leaks, occurring due to outdated infrastructure, lead to air pollution with methane, of which on average about 1 million tons per year are burned and released into the atmosphere. Burning "torches" over the Fergana Valley are a clear symbol of mismanagement and incompetent attitude to nature. Water and land resources contaminated with heavy metals in the Tashlak district, in the area of the Fergana chemical plant, the Kokand superphosphate plant, near the tailings of the UzOlmosOltin enterprise, in the area of the oil wells of the Mingbulak oil field are sources of increased danger to the environment and public health. This is rightly pointed out in the article by the Deputy State Committee for Nature Protection of the Fergana Region S. Dzhabbarov "Recycling oil waste". In the northwestern part of the mountainous framing of the Fergana Valley in the area of such deposits of rare metals as Chadak, Cherkisar, Pap, Uyghursay, there are local soil contaminations with arsenic, lead, strontium, manganese, beryllium. The intensity of the gamma field on the surface of the dumps is 300-450 $\mu\text{R}/\text{hour}$. Sources of environmental threats here, as in the Bukhara region, are also abandoned agricultural airfields, where organochlorine pesticides are still stored. The soils in the Fergana region are the most polluted with DDT and other pesticides: in some areas, the pollution level exceeds 38-39 MAC. The use of a new method of cultivating cotton under film aggravates the degradation of land resources, since a huge amount of film is buried in the ground every year, despite the fact that the decomposition period of polyethylene film is at least 100 years. Much has been written and said about the significant scale of the environmental problems of the Aral Sea and their impact on the environment and public health. These problems must be solved today: tomorrow may be too late. Could anyone have imagined twenty years ago that the drying up of the Aral Sea would be so rapid and irreversible? Meanwhile, the associated global warming of the climate in the Central Asian region is a bitter reality of today.



In nature, as we know, everything is interconnected. The loss of just one link in the chain pulls others along with it, leading to the emergence of a whole series of new problems. The Aral crisis and its consequences in terms of the scale of impact on the environment and climate is an unprecedented phenomenon, unparalleled in the world. This is not only a problem for the Central Asian countries: it must be addressed by the entire world community.

Obviously, to overcome the degradation of the Aral Sea, fundamental research by leading specialists is needed, who will assess the scale of the catastrophe on a quantitative basis and propose priority areas of action aimed at solving the problem.

Timely resolution of environmental problems helps to identify and prevent possible social, economic, political conflicts that can lead to tension in society or conflicts between states.

At the Dushanbe Water Forum, held in August 2003, the president of the NGO "Perzent" Oral Ataniyazova raised the issue of the social and economic nature of the impact of the drying up of the Aral Sea on the population. In fact, environmental degradation in these areas is known to have led to a sharp decline in the health of the population. In this regard, I would like to propose introducing a single standard for assessing the health of the population in areas of environmental stress. Obviously, it would be reasonable to take average life expectancy and mortality rate (differentiated by gender and age) as parameters for characterizing the health of the population. Other indicators can be determined and compared only with a complete survey of the population using a single method. In the absence of this, the real picture of the impact of polluted environment on the health of the population very often remains unknown.

During his economic activity, man influences nature, adapting it to his interests and needs. At the same time, he processes natural elements, concentrates them, redistributes them across the territory, and sometimes directly uses them as finished products.

The relationship between society and nature during human economic activity consists in the interdependent action of three components of the economy - the natural environment, means of production and labor resources. Environmental protection means protecting the natural environment: air, water, soil, vegetation and wildlife from the destructive impact of humans. Environmental protection means protecting the natural environment: air, water, soil, vegetation and wildlife from the destructive impact of humans.

Today, pollution of nature with waste from both industrial and non-industrial activities continues to grow.

Almost all sectors of the national economy, in the sphere of consumption in everyday life and recreation, by-products are formed, which are generally called waste. Sometimes waste emissions exceed certain threshold values so much that they slow down or hinder the use of natural resources, pollute the atmosphere, water, soil, and through them food products, and also reduce aesthetic values.

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