

# ECOLOGICAL PROBLEMS AND THREATS TO HUMAN HEALTH: HISTORICAL AND MODERN ANALYSIS

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**Annotation:** This article presents specific figures and examples of atmospheric pollution, the spread of toxic gases and the disruption of the ecological balance. It is emphasized that this problem is relevant not only for Uzbekistan, but for all of humanity. It is shown that modern industry and technologies operate contrary to the principles of environmental safety. This leads to pollution of environments such as air, water, and soil.

**Keywords:** Modern environmental problems, History of nature conservation, Agriculture during feudalism, Ancient nature reserve traditions in Central Asia, Environmental legislation in Russia, Peter I and ecological society.

**Introduction.** The scientific and technological revolution has presented humanity with a number of complex issues, one of which is the environmental problem. Due to insufficient knowledge about the environment and the ecologically unsoundness of the equipment and technology used, human economic activity causes the release of a number of toxic gases into the atmosphere. For example, according to official data, the atmosphere is annually negatively affected by more than 210 million tons of carbon dioxide, 50 million tons of various gaseous hydrocarbons, 260 million tons of sulfur oxides, and more than 50 million tons of nitrogen oxides. We say that the air is polluted only when the mixture of foreign substances in the air is compared with the permissible amount, which is accepted as a norm. For example, in the USSR, sulfur dioxide emissions into the air in 1987 amounted to 36 million tons, of which 616 thousand tons were accounted for by Uzbekistan.

In March 1989, the amount of sulfur dioxide in the air of the city of Almalyk was 5 times higher than the norm, and carbon monoxide - 4 times higher. During the same period, in the city of Fergana, sulfur dioxide was 2 times higher than the norm, carbon monoxide - 8 times, and dust - 15 times higher. The neutralization of nitrogen and sulfur oxides, which have the highest toxicity, produces more than two billion tons of ash.

**Main part:** In 1980, 27 tons of minerals and rocks were mined per person on Earth, of which 2 percent were converted into products, while the remaining 98 percent were released into the air as waste. Another reason for the spread of toxic substances is the transformation of most chemical compounds used in various sectors of the national economy into toxic substances as a result of processes occurring in the biosphere. Of the 600,000 chemical compounds currently used, 40,000 are harmful and 12,000 are highly toxic. For various reasons, they enter the air, water, and soil, polluting the environment and poisoning nature. It is known that a person cannot live more than 5 minutes without breathing. His average need for air is 12 cubic meters per day. This is several times more than the amount of food consumed by a person per day. Therefore, protecting the air from toxic substances is an extremely important task for the present and future generations. This article covers the results of some



scientific studies conducted by our department on reducing atmospheric pollution by various exhaust gases. Foreign substances in the atmosphere in a certain mixture and over a certain period of time affect human and animal health, the state of plants and objects, atmospheric properties and some environmental factors. According to 1988 data, the majority of gases emitted into the atmosphere fall on the energy sector - 22.2 percent and the gas industry - 26.0 percent. A total of 850 industrial enterprises pollute the air from about 65 thousand exhaust gas sources, of which 52 percent are not equipped with purification or neutralization devices. A relatively severe environmental situation in terms of the amount of exhaust gas was observed in the Tashkent (434.18 thousand tons), Kashkadarya (277.86 thousand tons) and Fergana (175.88 thousand tons) regions. According to calculations, in 1987 the amount of harmful and toxic gases emitted into the air by industrial enterprises in the regions amounted to 150-211 kilograms per capita. The share of exhaust gases from industrial centers in the Tashkent region (Chirchik, Almalyk, Bekabad, Angren, Tashkent) is about 24 percent of the republic's total. In 1988, industrial enterprises in Almalyk emitted 166.24 thousand tons, Angren - 68.78 thousand tons, Chirchik - 18.21 thousand tons, Bekabad - 21.18 thousand tons and Tashkent - 49.88 thousand tons of exhaust gases into the atmosphere. The exhaust gases of industrial enterprises of the city of Almalyk are 38 percent of those of the Tashkent region. In the Fergana region, 80 percent of the exhaust gases are produced by industrial enterprises of the city of Fergana. The exhaust gases contain nitrogen, sulfur oxides, hydrocarbons, carbon monoxide, dust and other toxic chemical compounds. If we take into account the above-mentioned toxic level of air pollution in our republic, then only 17.4-40.3 percent.

During the primitive community system, people began to pay attention not only to obtaining the food they needed, but also to the state of the goods they received from nature. People, of course, wanted to determine the causes of natural phenomena and processes, the connections between them. More advanced types of production tools - bows and arrows, more complex fishing tools - allowed ancient people to obtain more of what they naturally needed and to catch animals in a wider area, to hunt. All this led to the rapid destruction of the habitat of ancient people, a decrease in food. People began to take some measures to protect natural resources that were important for their lives. For example, hunting various animals and collecting useful plants in certain areas began to be prohibited. Mass extermination of useful animals was punishable by death in many primitive peoples. This was the beginning of the history of nature conservation. Places where valuable animals, wild plants suitable for hunting and eating grow are declared sacred, and hunting and gathering of plants is prohibited in these places. Thus, unique primitive reserves have emerged. During this period, primitive animal husbandry and primitive agriculture began to develop. This allowed people of the primitive communal system to make better use of land and pastures, and a primitive system of using nature gradually emerged. Slavery is the first class society in which private property appeared. In the primitive seed system, instruments of production and means of production were not privately owned, collective labor prevailed. Measures were also taken in slave society to protect nature. Because in almost all primitive class societies, droughts occurred, and it was impossible to live without irrigation.

Because of the great need for timber, laws began to be created to protect forest trees. For example, the Babylonian king Hammurabi, who was always in need of wood in 1792-1750 BC, that is, about 4 thousand years ago, took measures to protect forests. During the feudal period, the stratification of antagonistic classes - feudal lords and serf peasants - intensified.

This did not allow for a rational attitude towards natural resources. In this economic and social formation, very large territories in Europe and Asia were developed. Until then, unknown natural resources were used in agriculture and industry. Croplands were expanded due to the destruction of forests. Forests were cut down to build a large number of ships, which were needed to conquer new colonies in remote places. Minerals - iron and silver - began to be mined in large quantities. Instead of primitive animal husbandry, hunting and fishing, characteristic of the feudal era, agriculture flourished. In order to radically expand the land suitable for agriculture, forests were cut down in large quantities in European countries. In addition, a large number of plane trees, oaks and other valuable trees were cut down for shipbuilding. Suffice it to say that 4,000 oaks were needed to build one ship. Half a million oak trees were cut down for the Spanish military fleet, famous in medieval history. Although 400 years have passed since that time, Spain has not yet restored its forestry. First, forests were cut down for shipbuilding, and then for planting coffee and sugar cane.

The deforestation of large areas in Europe directly affected the animal world. It is known that by the time of feudalism, many animals living in the steppes and forests - the badger and the marten, the reindeer, the tur, the ibex, the saiga, the water beaver, the swan, the tawny owl, the goose and others - were completely extinct. At the same time, many species of harmful insects and rodents multiplied in the changed landscapes of nature and became a real disaster for crops. By the end of the feudal era, the nature of Germany was in a very difficult situation, the terrain, climate, plants, the animal world, and even people themselves were changing dramatically; all this was due to human activity. In Russia, during this period, new lands were brought into the economy. On the Russian Plain, after the forests, agriculture prevailed, and in the forestless steppes, the agricultural system prevailed. As a result of the conversion of forests into arable land and the emergence of small trees in their place, the number of bears, martens, lynxes, deer, roe deer, and other animals decreased. The steppes were later greatly transformed in the 18th and 19th centuries. Nevertheless, during the feudal period, nature conservation took a more specific form. Feudal lords, interested in keeping game animals and other animals on their lands, began to enact laws to protect them. Anyone who violated any law was severely punished.

**Results and discussions:** Reserves in Central Asia have existed since ancient times and were called reserves. The historian Narshahi wrote that 1,000 years ago, the Shamsabad reserve was established near Bukhara, surrounded by a high wall, and wild animals such as deer, roe deer, foxes, and bears lived in the reserve. During the time of Babur, the "Quail Reserve" near Samarkand was famous for quail hunting. In the Kyrgyz Alatau reserve, mainly kulans were protected and horses and kulans were crossed. Kokand Khan Khudoyorkhan had several reserves along rivers, lakes, and in wastelands, where cutting down trees, preparing firewood, and hunting were allowed with certain permits. In Russia, the first laws protecting nature in the 11th and 17th centuries were related to hunting, because hunting was of primary importance to the Slavs. In particular, the first written documents of Russian law, "Russkaya Pravda" by Yaroslav the Wise, contain rules on hunting wild animals and birds. This also raises the issue of restricting hunting. For example, in the 11th century, a fine of 12 gravins was paid for illegal hunting of a beaver. This was equivalent to the price of two cows, a horse, or a sheep.

During the reign of Peter I's father, Alexei Mikhailovich (1645-1676), 67 decrees were adopted on hunting. These decrees spoke about hunting periods, prohibited areas, violations of hunting rules and penalties for this, prohibitions, punishments. In 1649, the "Decree on the



Preservation of the Reserve Forest in the Ryazan Uyezd" was adopted. During the reign of Peter I, a lot of work was done on nature conservation. If before Peter I, forests were mainly cleared for planting crops, then Peter I introduced the use of forests for shipbuilding. This played a major role in the development of the Russian economy and power. Peter I took decisive action to prohibit and limit deforestation. For example, a decree was issued in 1703 prohibiting the cutting down of forests along rivers for planting crops, the transportation of wood to Moscow, and the cutting down of valuable trees such as oak, elm, hornbeam, alder, and pine from trees up to 30 kilometers above sea level. In the late 19th and early 20th centuries, the movement for nature conservation among scientists also intensified in Russia. In particular, the Moscow Society for the Study of Nature, founded in 1805, published many articles on nature conservation. The first scientific societies for nature conservation in Russia were formed at the beginning of the 20th century. The first reserves in the country were established on the initiative of scientific societies and individual individuals. For example, in 1882, a reserve was established in Kamchatka at the expense of private funds. In 1893, the Askania Nova private steppe reserve was established in southern Ukraine. The Riga Society of Nature Investigators established reserves on the islands of Saaremaa in 1910 and Moriula in 1912. In 1912, a permanent commission for nature protection was established in the Russian Geographical Society, created by A.A. Borodin, and in 1916 the first law on reserves was adopted. In the same year, the first Russian state reserve, Borguzin, was established on the eastern shore of Lake Baikal. In the following period, the influence of society on nature increased even more. The large-scale use of natural resources, primarily minerals, became the most important direction of industrial progress. The increasing use of natural resources, the widespread geographical division of labor, and the unprecedented rapid growth of cities - all this leads to a fundamental change and complication of the relationship between man and nature. Recently, in many countries, some leaders and progressive organizations have come to view work on nature conservation as a factor in maintaining the economic and international prestige of the state. Therefore, in recent years, great attention has been paid to environmental education in European countries, laws on nature conservation are being improved. New reserves and national parks are being created. On the basis of specific measures taken by the former Soviet government to protect nature, it became the direct initiator of the development of a number of documents aimed at the interaction of man with nature and the rational use of natural resources. Therefore, the decrees and resolutions of the first years of the former state power played a decisive role in implementing a new attitude towards nature.

Article 55 of the Constitution of the Republic of Uzbekistan (December 8, 1992) on nature protection states that "Land, subsoil resources, water, flora and fauna, and other natural resources are national wealth, they must be used rationally and are under state protection." This provision is fully reflected in the "Law on Nature Protection" of the Republic of Uzbekistan. The establishment of numerous reserves and reserves in our republic also indicates that nature protection is based on a broad scientific basis. International cooperation is necessary in nature protection. Indeed, the issue of nature protection cannot always be resolved by the efforts of a large country with diverse natural conditions. The issues of nature protection in the surrounding area include a variety of local, national, and global problems. For example, migratory animals, birds, fish, and marine animals do not recognize state borders. Such animal protection problems or general issues of environmental protection are resolved at the level of intergovernmental agreements and international treaties. Currently, two main forms of cooperation in the field of

nature protection have emerged in the world: 1) bilateral conventions on environmental protection and rational use of natural resources; 2) participation in the activities of international organizations for nature protection. The first international conference on current environmental problems - the Intergovernmental Conference of Experts on the Scientific Basis of Rational Use of the Biosphere and Conservation of Resources - was a major event in the work on the use and protection of world natural resources. This conference opened in the UNESCO building and lasted from September 4 to September 16, 1968. This conference was very authoritative: 238 delegates from 63 countries that were members of UNESCO and 6 representatives of UN member states and 88 representatives from other organizations took part in its work. Delegates from Sweden, France, Germany, Hungary, and the United States made particularly detailed reports at the conference. The conference considered all important issues of nature conservation on a biosphere scale. In 1948, the International Union for the Conservation of Nature and Natural Resources was established under the auspices of the UNESCO UNEP International Biological Program. This Union includes representatives of most countries in the world - institutions and public organizations. More than 120 international organizations include about 350 national organizations from countries and many international organizations. The headquarters of this organization is located on the beautiful shores of Lake Geneva in Switzerland. The Republic of Uzbekistan is drawing the attention of the entire world community to the international movement to prevent an ecological disaster, especially in the Aral Sea and the Aral Sea region. One of the greatest achievements of these international organizations is the creation of the unique "Red Book". Its Assemblies address many issues related to the protection of animals and plants in specific regions of the globe (for example, Africa and Uzbekistan), teaching the basics of nature conservation in secondary and higher educational institutions, establishing reserves, banning hunting and fishing, deforestation, and other issues. In many countries of the world, including Central Asia, reserves have been established, orders have been issued, and "Red Books" have been published to protect plants and animals. Air, water, and soil protection is established by law.

**Conclusion:** In modern medicine, cancer is known as "cancer". It is also called "tumor" among the people. When it comes to cancer, any medical representative remains silent, not wanting to admit their inability to treat it. However, in folk medicine, in particular, Sufi medicine, certain results have been achieved in the treatment of cancer. In general, when it comes to cancer, scientists predict that by 2015, every third person living in the world will suffer from this terrible and incurable disease.

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