

**ATMOSFERA'S POLLUTION AS AN ACTUAL GLOBAL PROBLEM****Maxmud Allamuratov***Head of Department of Ecology and Soil Science of Karakalpak State University***Perizat Tlepbergenova***Teacher of Department of Ecology and Soil Science of Karakalpak State University*

The atmosphere is the air cover of the earth and is one of the main sources of life in the biosphere. The atmosphere protects all living things from harmful cosmic rays and keeps the heat on the planet's surface. If the weather was not cloudy, the temperature on the surface of the earth would be +100 C during the day and -100 C in the evening. The upper limit of the atmosphere passes at an altitude of about 2000 km, the atmosphere consists of several layers. Its main mass is located in the lower troposphere at an altitude of 10-16 km, weather and climate are largely related to atmospheric processes. Atmospheric air without foreign additives consists of the following components; nitrogen - 78.1%, oxygen 20.9%, argon and other inert gases 0.95%, carbon dioxide 0.03%. The amount of other gases is relatively small. In addition, there is always 3-4% water vapor in the air. There will be dust particles. Each gas in the atmosphere has its own physical and chemical properties.

For a long time, there have been relatively constant amounts of main gases in the atmosphere, and in recent years, changes in the balance of gases have been observed as a result of increasing human influence. It has been determined that the constant change in the amount of gases in the atmosphere will have negative consequences for our planet. In recent years, as a result of the release of tens of billions of tons of carbon dioxide into the atmosphere, the average temperature of our planet has increased by 0.5 C. It is predicted that the change in the average temperature of the earth's surface as a result of the "greenhouse effect" will have severe ecological consequences. Every year, more than 10 billion tons of additional oxygen is used for combustion processes on the surface of the earth. Taking into account the rapidly decreasing area of green plants, sources of oxygen in the biosphere, there is no doubt that the problem of oxygen depletion will arise in the future.

Atmospheric pollution means changes in its physical and chemical properties as a result of the addition of foreign compounds to the air, the atmosphere is polluted by natural and artificial means. Volcanic eruptions, dust, fires in forests and steppes, plant dust, micro-organisms, space dust and others are natural sources of pollution. Man-made sources of pollution include energy, industrial enterprises, transport, household waste, etc. Currently, the level of artificial pollution of the atmosphere is increasing. Local, regional and global pollution of the atmosphere is observed. Air polluting compounds can be divided into four groups according to the state of the aggregate; solid, liquid, gaseous and mixed compounds, the main substances and compounds that pollute the air

include aerosols, solid particles, soot, nitrogen oxides, carbon oxides, sulfur oxides, chlorofluorocarbons, metal oxides, etc., tens of thousands of tons of substances and compounds have been released into the atmosphere and the mixtures formed by their intermingling have not been fully beaten. The impact of such unknown compounds on living beings, including human health, has not been accurately assessed.

Strong air pollution causes the death of some domestic animals. The amount of pollutants in atmospheric air that does not directly or indirectly have a harmful effect on the human body is called the permissible amount (REM). This means that harmful compounds do not affect human labor activity and mood. Air pollution higher than regular REM leads to a sharp increase in the level of morbidity of the population. The level and impact of air pollution in residential areas are determined by REM indicators. Different REM indicators are defined depending on the level of impact of different substances. Until now, REMs of 600 chemical substances in atmospheric air have been developed, as well as a combination of 38 substances. have been studied and standards have been set for them.

The thinning of the ozone (O<sub>3</sub>) layer, a special protective layer of the atmosphere located in the range of 20-30 km, is also one of the urgent environmental problems. The ozone layer protects humans and all living things from the harmful effects of the sun's ultraviolet rays. Ozone is destroyed under the influence of freon, chlorofluorocarbons, and nitrogen oxides. Ozone holes have formed at the Earth's poles, over some regions and large cities. Currently, local, regional and global measures are being taken to prevent the environmental consequences of ozone depletion. In the last 10-15 years, acid rain has become a real environmental disaster in some countries. When any fossil fuel is burned, the exhaust gases contain sulfur and nitrogen oxides. Millions of tons of these compounds are released into the atmosphere, turning rain into acid. In recent years, forests in the USA, Canada, Germany, Sweden, Norway, Russia and other developed countries have started to dry up in large areas under the influence of acid rain. Such rains reduce productivity, erode buildings, historical monuments, and harm human health. As a result of long-distance migration of acid rain, disputes arise between different countries. Local and international activities are being held to eliminate this ecological risk.

Toxic fog-smog (a mixture of smoke and fog) observed as a result of stagnant air in some regions has a very negative effect on human health. On December 5-9, 1952, more than 4,000 people died as a result of the smog that occurred in London, and in the following years, London-type smog and Los Angeles-type smog were recorded in major cities of the world. Photochemical smog is defined as the reaction of industrial and transport exhaust gases under the influence of sunlight to form dangerous compounds. In particular, there is an increase in the formation and amount of ozone, formaldehyde and other compounds. Smog prevention is important. Urgent measures should be taken

to reduce air pollution on Earth. As the American meteorologist Luis Batgan said: either people reduce the smoke in the air, or the smoke reduces the people on the earth.

Atmosfera's pollution has various socio-economic consequences. Deterioration of human health, decay of buildings, historical monuments, death of plants and animals and other events cause great economic damage. Only in the USA, if air pollution does not take into account the damage caused to human health, it costs 30 billion dollars a year. causes material damage of more than USD. Atmospheric air is self-cleaning. But this opportunity is limited. Elimination of high levels of man-made pollution is a task that must be carried out by people themselves. There are various ways to prevent and reduce air pollution. Cleaning devices will be installed in enterprises, harmful enterprises will be removed to the outskirts of the city. Changing production technology, especially switching to waste-free technology, is the most promising way to solve this problem. Currently, the contribution of motor vehicles to air pollution is increasing. More than 500 million cars around the world emit hundreds of thousands of tons of harmful compounds into the air every day. Car smoke contains more than 200 harmful compounds, including compounds that cause lung cancer and other serious diseases (benzapyrine, lead, etc.). More than 70 percent of air pollution in Tashkent is caused by road transport. In other large cities of Uzbekistan, the contribution of transport to air pollution is also increasing. activities are important in reducing air pollution in big cities. The creation of environmentally friendly means of transport is one of the priorities of today.

Atmosfera's pollution is one of the main environmental problems in the Republic of Uzbekistan. The fact that the cities are mainly located in the foothills and intermountain depressions, the hot and dry climate has led to a relatively high level of atmospheric air pollution in Uzbekistan. The atmospheric air in Uzbekistan is heavily polluted, especially in the economic regions of Tashkent and Fergana, where the population, industry and transport are highly concentrated. The level of air pollution is very high in the cities of Almalyk, Tashkent, Fergana, Bekobod, Andijan, Chirchik, and Navoi, which are centers of metallurgy, chemistry, and mechanical engineering. Some of these cities, which have values higher than REM for a number of harmful compounds, are at risk of photochemical smog.

As a result of Uzbekistan's transition to market relations and the implementation of various environmental measures in recent years, the amount of waste released into the atmosphere has decreased. If in 1990, 4 mln. In 1995, more than 2 million tons of harmful compounds were released. The decrease in the amount of waste emitted into the atmosphere is directly related to the decrease in the capacity of industrial enterprises and the decrease in the volume of cargo transportation in transport. Various compounds are released into the atmosphere in Uzbekistan. More than 50 percent of harmful compounds are carbon monoxide (CO). The territory of our country is also polluted by harmful compounds coming from Russia, Kazakhstan, Tajikistan and other neighboring

countries. Research conducted in recent years (in the mountainous regions of Uzbekistan, over the city of Tashkent shows a 10-12% decrease in ozone. Dust and salts rising from the dry bottom of the Aral Sea are also causing air pollution in a very large area. Protection of atmospheric air is one of the priority issues in Uzbekistan. Monitoring and control of air pollution is well established. Fees and fines are set for enterprises for polluting the air in excess of the specified amount. Protection of the atmosphere in Uzbekistan a special law was adopted (December 1996).

In general, the problem of atmospheric pollution is considered one of the most urgent problems in the world, and solving this problem is necessary for the development of human society. This requires the human society to further increase scientific achievements. Indeed, solving this problem will require advances in modern science.

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