

**GLOBAL AND LOCAL ENVIRONMENTAL PROBLEMS: CAUSES,
CONSEQUENCES, AND SOLUTIONS****B.B.Umarov***Assistant of Andijan Institute of Agriculture and Agrotechnologies***F.U.Usmonov***Students of Andijan Institute of Agriculture and Agrotechnologies*

Annotation: This article extensively covers global and local environmental issues. Issues such as climate change, air, water, and soil pollution, the problem of waste, and the reduction of biodiversity are analyzed in depth. It also highlights the environmental problems that have arisen in Uzbekistan, including the Aral Sea disaster, desertification of lands, and water scarcity. The author emphasizes the importance of international experience, government policy, education, and public participation in addressing environmental problems.

Keywords: ecology, climate change, Aral Sea, biodiversity, waste, sustainable development, pollution, protection, desertification

Аннотация: В данной статье широко освещены глобальные и локальные экологические проблемы. Глубоко анализируются такие вопросы, как изменение климата, загрязнение воздуха, воды и почвы, проблема отходов, сокращение биоразнообразия. Также будут освещены экологические проблемы, возникшие в Узбекистане, в том числе Аральская трагедия, опустынивание земель и дефицит воды. Автор подчеркивает важность международного опыта, государственной политики, образования и участия общественности в решении экологических проблем.

Ключевые слова: экология, изменение климата, Аральское море, биоразнообразие, отходы, устойчивое развитие, загрязнение, охрана, опустынивание

The 21st century has become a century of ecological problems for humanity along with technological progress. In the process of economic growth and industrialization, the attitude towards nature remained unstudied and uncontrolled. As a result, global climate change, air, water, and soil pollution, the problem of waste, deforestation, and desertification processes have accelerated. These circumstances threaten the quality of life. Climate change and global warming

Today, greenhouse gases released into the atmosphere (carbon dioxide, methane, nitrogen oxide) disrupt the heat balance on the Earth's surface. According to international scientific reports, the Earth's temperature has increased by an average of 1.2°C over the past 150 years. This leads to the following consequences:

Rapid melting of glaciers (in Antarctica and Greenland);

Risk of rising sea level and submersion of coastal areas;

Drought and decreased yields;

Climate migration leads to a change in people's place of residence.

Declining biodiversity: The number of wild animal and plant species is declining year by year. All-famous animals such as the Panda, the Amur tiger, and the snow leopard are endangered. This is due to the following factors:

Deforestation (Amazon, Southeast Asia);

hunting on the basis of offenses;

Invasive species and diseases;



Disruption of ecosystems.

Air, water and soil pollution:

Air pollution is the cause of nearly 7 million deaths worldwide annually (according to WHO data). This problem is especially relevant in industrial centers, in cities with high traffic density:

PM2.5 particles cause serious damage to the respiratory tract of humans;

Drinking water is contaminated with nitrates, heavy metals, and microplastics;

Excessive use of chemicals in agriculture reduces soil fertility.

Aral Sea tragedy - a local ecological disaster:

The drying up of the Aral Sea has attracted the attention of ecologists around the world. In the 1960s, the Aral Sea was the fourth largest lake in the world, and today 90% of its water has dried up. This led to:

Sharp continentalization of the climate;

Sand and salt storms are affecting public health;

The fishing industry completely disappeared;

Unemployment and migration have increased.

Environmental solutions and sustainable development

The solution to the problem is not unique, but efforts are being made in the following areas:

International initiatives: the Paris Agreement, the fight against climate change through the Kyoto Protocol;

Renewable energy: Sun, wind, biogas;

"Green" technologies: EV cars, waste processing;

Eco-education: Ecology lessons in schools, collective actions;

Local projects: "Green Space" and "Ecological Atlas" projects in Uzbekistan, and the Aral Sea region restoration plan.

Environmental problems are complex and multifaceted. In the fight against them, the role of not only the government, but also every citizen is important. By raising environmental awareness and culture, conducting effective environmental policy, and strengthening international cooperation, we can preserve the natural environment. The actions taken today will lay the foundation for a healthy and stable life for future generations.

References:

1. Karimov, I.A. "Protecting Nature is Our Sacred Duty." - T.: Uzbekistan, 1992.
2. Odilov A., Mamatqulov B. "Fundamentals of Ecology." - T.: Teacher, 2021.

3. IPCC Sixth Assessment Report (AR6), 2023.
 4. UNEP. "Global Environmental Outlook 6" 2021.
 5. Official website of the Ministry of Ecology and Climate Change of the Republic of Uzbekistan: www.eco.gov.uz
- World Health Organization (WHO) - Air Pollution and Health, 2023.
7. UN Human Security Programme for the Aral Sea Region, UNDP, 2022.