



Measures For Preventing Environmental Problems And Their Practical Solutions

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ABSTRACT

This article discusses environmental problems that are currently considered urgent on both global and regional scales, their causes, and measures for their prevention. The impact of such environmental issues as air pollution, depletion of water resources, soil degradation, waste problems, and reduction of biodiversity on human health and the economy is analyzed. In addition, the practical significance of modern methods for solving environmental problems, resource-saving technologies, renewable energy sources, and environmental monitoring systems is described.

Keywords:

ecology, environmental problem, air pollution, water resources, waste, biodiversity, green technologies, environmental monitoring

Introduction. At present, environmental problems are considered one of the most important global issues facing humanity. As a result of scientific and technological progress, rapid industrial development, urbanization processes, and excessive use of natural resources, the ecological condition of the environment is deteriorating. Environmental problems negatively affect not only nature but also human health, the economy, and social development.

In recent years, issues such as climate change, desertification, water scarcity, air pollution, increasing waste volumes, and reduction of biodiversity have intensified worldwide. Therefore, ensuring environmental safety and the rational use of natural resources are among the most urgent tasks of today.

Special attention is also being paid in the Republic of Uzbekistan to eliminating environmental problems, introducing the principles of a "green economy," and protecting the environment. The Decree of the President of the Republic of Uzbekistan No. PF-5863 dated October 30, 2019, "On Approval of the Concept

of Environmental Protection of the Republic of Uzbekistan until 2030," serves as an important legal basis for ensuring environmental sustainability.

Main Part Air Pollution and Measures to Reduce It. Air pollution is one of the most dangerous types of environmental problems. Industrial enterprises, vehicles, thermal power plants, and household waste release large amounts of harmful gases into the atmosphere. Carbon dioxide, nitrogen oxides, and sulfur compounds emitted into the atmosphere contribute to global climate change.

The following measures are important for reducing air pollution:

- using modern filters and purification equipment at industrial enterprises;
- applying environmentally friendly fuels;
- developing electric vehicles and public transport;
- expanding green areas and tree plantations;

- increasing the use of renewable energy sources.

Today, solar and wind energy are recognized as the most environmentally efficient energy sources. They do not emit harmful substances into the atmosphere and make it possible to conserve natural resources.

Protection of Water Resources. The depletion and pollution of water resources are among the major environmental problems worldwide. Due to population growth and the development of industry and agriculture, the demand for water is constantly increasing. At the same time, the discharge of wastewater into rivers and lakes leads to deterioration in water quality.

The following practical solutions are important in protecting water resources:

introducing water-saving technologies; using drip irrigation systems; biological and chemical treatment of wastewater; protecting water bodies from pollution by waste; developing drinking water purification technologies.

The use of drip irrigation in agriculture significantly reduces water consumption and increases crop productivity.

Soil Degradation and Desertification Problems. Soil degradation, salinization, and erosion occupy a special place among environmental problems. The decrease in soil fertility negatively affects the production of agricultural products.

The following measures are recommended for soil protection: introducing crop rotation systems; using organic and mineral fertilizers appropriately; establishing protective forest belts against wind erosion; implementing land reclamation measures; using biological fertilizers.

In particular, the development of organic farming technologies is an important factor in producing environmentally safe products.

Waste Problems and Recycling. The increasing amount of household and industrial waste negatively affects the ecological condition. Plastic waste, chemical substances, and electronic waste remain in nature for a long time and disrupt ecological balance.

The following methods are effective in solving waste problems: introducing waste sorting systems; developing the recycling industry;

using biodegradable materials; increasing public environmental awareness; implementing waste-free technologies. Through recycling, secondary products can be obtained from plastic, paper, and metal waste. This contributes to the conservation of natural resources.

Preservation of Biodiversity. The reduction of plant and animal species is another important type of environmental problem. Deforestation, illegal hunting, and destruction of natural habitats lead to the extinction of many species.

To preserve biodiversity, it is necessary to: expand nature reserves and national parks; protect rare species; restore forest areas; strengthen environmental education and awareness; improve environmental legislation. Nature conservation has not only ecological but also economic and social significance.

Conclusion. Preventing environmental problems and reducing their negative consequences are among the most important tasks of today. Air pollution, water scarcity, soil degradation, waste problems, and the reduction of biodiversity pose serious threats to the future of humanity.

Introducing modern technologies, using renewable energy sources, developing environmental monitoring systems, and increasing public environmental awareness are of great importance in solving environmental problems.

In the future, to ensure environmental sustainability, it is necessary to strengthen cooperation between the government, science, and society, use natural resources rationally, and widely implement the principles of a "green economy."

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