



MODERN ECOLOGICAL PROBLEMS AND THEIR IMPACT ON HUMAN RIGHTS

Otakova Mahbuba Alisherovna

Master's student, Berdakh Karakalpak State University

Email: mahbubaotakova@gmail.com

Tel: +998973645709

<https://doi.org/10.5281/zenodo.17774403>

ARTICLE INFO

Received: 27th November 2025

Accepted: 28th November 2025

Online: 29th November 2025

KEYWORDS

ecology, climate change, waste management, water scarcity, biodiversity, environmental protection, Aral Sea problem, atmospheric pollution, ecological system disruption, desertification, soil erosion

ABSTRACT

This article examines the most pressing environmental problems of our time, their causes, and their impact on human life and rights. It also focuses on ways to address these issues and emphasizes the importance of international cooperation in solving global ecological crises. Particular attention is paid to the ecological challenges in Uzbekistan, including the Aral Sea disaster, desertification, and air pollution.

Introduction

In recent decades, ecological problems have become one of the most urgent challenges facing humanity. Technological progress, industrial development, and urbanization have led to an imbalance in nature, posing a serious threat to human existence. Among the most significant global environmental issues are climate change, atmospheric pollution, waste management, water scarcity, and loss of biodiversity.

Climate change manifests itself in the rise of global temperatures, melting of glaciers, sea level rise, and extreme weather events such as droughts and floods. The main reason for these changes is the increase in greenhouse gases, including carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).

Atmospheric pollution is caused by emissions of harmful gases and particles into the air, threatening not only nature but also human health, particularly in large cities.

Waste management is another critical issue. The increase in plastic waste, the lack of effective recycling systems, and toxic industrial waste cause serious harm to the environment. Although some countries have introduced recycling and composting systems, the results are still insufficient.

Water scarcity and pollution have also become global crises. The reduction of freshwater resources and pollution of rivers and lakes affect both developed and developing countries.

Loss of biodiversity due to deforestation, reduction of wildlife habitats, and excessive use of pesticides and fertilizers is causing rapid decline in both animal and plant species.

Methods

The research employs **comparative-legal, analytical, and systematic approaches**. International and national legal documents, scientific articles, and statistical data were analyzed to identify the connection between environmental degradation and human rights protection.

Results and Discussion

In addition to global problems, Uzbekistan also faces serious ecological challenges. Located in the environmentally fragile region of Central Asia, the country's environmental stability affects the sustainable development of the entire region.

After independence, Uzbekistan introduced a number of reforms to address ecological problems, yet many issues remain unresolved.

The Aral Sea Disaster

The Aral tragedy is one of the largest ecological disasters in the world. The complete drying of the sea has led to the destruction of ecosystems, a sharp rise in temperature, desertification, and frequent dust and salt storms. These phenomena have caused serious damage to human health, agriculture, and biodiversity. To mitigate these effects, Uzbekistan and the Republic of Karakalpakstan are implementing numerous practical measures, including reforestation of the Aral Sea bed and social support programs for local populations.

According to **Article 49 of the Constitution of the Republic of Uzbekistan (2023)**, "The state, in accordance with the principle of sustainable development, shall take measures to improve, restore and protect the environment, and preserve ecological balance. The state shall ensure the protection and restoration of the Aral Sea region's ecosystem and promote its social and economic development."

Desertification and Soil Erosion

Desertification and soil erosion are major ecological problems in the regions of Kashkadarya, Bukhara, Navoi, and Karakalpakstan. The salinization and erosion of irrigated lands reduce agricultural productivity. Recognizing the seriousness of this issue, the government has incorporated specific environmental tasks and deadlines into national development programs.

Water Resources and Environmental Culture

Water scarcity and pollution remain among the most urgent ecological problems of Uzbekistan. Inefficient water use, outdated irrigation systems, and population growth have intensified this problem. The lack of environmental awareness among the population also contributes to the deterioration of water quality. Industrial waste discharge into open water bodies aggravates the situation.

According to the **Decree of the President of the Republic of Uzbekistan PF-60 (January 28, 2022)** "On the Development Strategy of New Uzbekistan for 2022–2026," several important measures have been planned, including the "Yashil Makon" (Green Space) national project.

The "Yashil Makon" National Project

Key initiatives include:

- Planting at least 200 million trees annually and establishing an aerobiological monitoring system in 10 regions.
- Increasing household waste recycling from 21% to 50% by 2026.

- Designating sanitary protection zones for 51 surface water bodies across the republic.
- Expanding green areas in Tashkent City to 30%.
- Creating 2.5 million hectares of green zones on the dried bed of the Aral Sea by 2026.
- Implementing environmental projects worth \$300 million with the support of international funds.

- Establishing public parks for every 50,000–100,000 residents.

Most of these measures are being implemented, showing Uzbekistan’s serious commitment to environmental protection and sustainable development.

Air Pollution

Air pollution has recently become one of Uzbekistan’s most pressing environmental problems. Industrial centers such as Tashkent, Almalyk, Navoi, and Angren are the main sources of air contamination. The increase in vehicles also contributes to atmospheric pollution. According to the **“Uzbekistan–2030” Strategy (PF-158, September 11, 2023)**, significant attention is given to preventing air pollution, improving waste management, and mitigating the impacts of climate change.

Conclusion

Solving environmental problems requires joint efforts by governments, non-governmental organizations, the public, and individuals. Education and awareness, strong environmental legislation, and the implementation of green technologies are essential. Humanity must learn to live in harmony with nature; otherwise, environmental problems will deepen and threaten future generations.

Recommendations

1.Efficient use of water resources: Introduce water-saving technologies (drip and sprinkler irrigation), modernize irrigation systems, and enhance public awareness.

2.Rehabilitation of the Aral Sea region: Expand planting of drought-resistant vegetation, improve health and social programs, and develop eco-tourism.

3.Reduction of air pollution: Install modern filters at industrial enterprises and promote electric transport.

4.Waste management: Establish waste separation systems, encourage private investment in recycling, and utilize eco-friendly disposal methods.

5.Environmental education: Improve environmental education in schools and universities, and support community participation in ecological projects.

Legal and institutional improvements: Strengthen accountability for environmental damage and digitize environmental monitoring systems.

References:

- 1.Constitution of the Republic of Uzbekistan (new edition), adopted by national referendum on April 30, 2023. <https://lex.uz/docs/6445145>
- 2.Presidential Decree PF-6012 (June 22, 2020) “On the Approval of the National Strategy on Human Rights.”
- 3.Presidential Decree PF-158 (September 11, 2023) “On the Uzbekistan–2030 Strategy.” <https://lex.uz/uz/docs/6600413>
- 4.Presidential Decree PF-60 (January 28, 2022) “On the Development Strategy of New Uzbekistan for 2022–2026.” <https://lex.uz/uz/docs/5841063>

5. Presidential Decree PF-81 (May 31, 2023) “On the Transformation of the System of Ecology and Environmental Protection.”
6. Resolution PQ-3956 (October 3, 2018) “On Additional Measures to Improve the System of Environmental Governance.”
7. IPCC (2023). Climate Change 2023: Synthesis Report. <https://www.ipcc.ch>
8. World Health Organization (WHO). Air Pollution Data and Statistics. <https://www.who.int>
9. United Nations Environment Programme (UNEP). Global Environment Outlook 6.
10. Karimov, R. (2021). Environmental Protection: Theory and Practice. Tashkent: National Encyclopedia of Uzbekistan.
11. Khabibullayev, A. (2020). Fundamentals of Ecology. Tashkent: Fan Publishing House.
12. Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan. <https://eco.gov.uz>

