



ARTICLE

Increasing Public Awareness and Knowledge of Ecology in Uzbekistan

Rayxon X. Mudarisova¹, Jasur M. Mukhammadiyev¹ and Mumtozbegin O. Sodiqova^{1,*}

¹Uzbekistan State World Languages University, 21A, Kichik Khalqa Yuli, Uchtepa, Tashkent, 100138, Uzbekistan.

Abstract

Environmental issues have become one of the most pressing global challenges, and Uzbekistan is no exception. Raising public awareness and ecological knowledge is essential to ensuring environmental sustainability. This article explores the significance of ecological awareness, existing challenges, and potential solutions to enhance public understanding of environmental protection. Key issues include the lack of comprehensive ecological education, insufficient public engagement, and limited media coverage of environmental matters. The paper also proposes solutions such as strengthening ecological education in schools and universities, increasing awareness campaigns through mass media and social networks, and promoting community-driven environmental initiatives.

By implementing these measures, Uzbekistan can foster a more environmentally conscious society and contribute to global sustainability efforts.

Keywords: ecological awareness, environmental education, public engagement, sustainability, Uzbekistan, green initiatives, environmental protection.

1 Introduction

Environmental protection and sustainable development are critical for Uzbekistan's future. The country faces several ecological challenges, including desertification, air pollution, and water shortages. Increasing public awareness and knowledge about these issues is vital to fostering responsible behavior and ensuring long-term ecological balance. Firstly, let me define the phrase ecological awareness. It refers to an individual's understanding of environmental issues and sustainable practices. According to Frank Herbert, in his novel named "Dune," the main character's father tells him, "You must cultivate ecological literacy among the people" [1]. In another source, it is also called "*Ecological literacy*" or "*Ecoliteracy*" and in order to be eco-literate, people should understand the principles of ecological communities(ecosystems), as well as use them for creating sustainable human communities. From these sources, it is clear that holistic ecological consciousness is imperative, as it helps to tackle environmental problems. According to Fritjof Capra, "In the coming decades, the survival of humanity will depend on our ecological literacy – our ability to understand the basic principles of ecology and to live accordingly. This means that eco-literacy must become a critical skill for politicians, business leaders, and professionals in all spheres and should be the most important part of education at all levels – from primary and secondary schools to colleges, universities, and the continuing education and training of professionals." [2].

Citation

X. Mudarisova, R., M. Mukhammadiyev, J., & O. Sodiqova, M. (2025). Increasing Public Awareness and Knowledge of Ecology in Uzbekistan. J Open, 01(02), 8–12.

Copyright: © 2025 by the authors. Submitted to J Open for possible open access publication under the terms and conditions of the Creative Commons Attribution-NonCommercial (CC BY-NC) license (<https://creativecommons.org/licenses/by-nc/4.0/>).

Submitted: February, 2025

Accepted: May, 2025

Published: June, 2025

Vol. 01, No. 02, 2025.

 [10.70728/jopen.be.0225.002](http://dx.doi.org/10.70728/jopen.be.0225.002)

***Corresponding author:**

✉ Mumtozbegin O. Sodiqova

sodiqovamumtozbegin@gmail.com

2 Materials and methods

In my research, I analyzed the existing ecological problems in Uzbekistan, and I can say that currently, our Republic is a central industrial and agrarian region, with plans to further develop globally oriented industries such as mechanical engineering, energy, chemical production, the food industry, and the transport sector. However, the growth of such productive forces has a particular negative impact on the state of socio-ecological systems in the Republic. The pressing environmental and nature conservation issues in the Republic include:

- Environmental protection challenges exist in districts with large regional industrial complexes, such as Angren-Olmaliq-Chirchiq, Fergana-Margilan, Navoiy, and others. The socio-ecological situation in these areas is unfavorable because various gases and industrial waste emitted by industrial centers cause environmental degradation;
- Environmental problems in the agro-industrial sector;
- Pollution of natural water sources with industrial waste, pesticides, and mineral fertilizers;
- Issues related to the protection and restoration of flora and fauna, as well as the expansion of protected areas and national parks.

The main strategic goals of the Republic of Uzbekistan in the field of environmental protection and sustainable resource use include:

- Creating favorable conditions for public health and maintaining biospheric balance;
- Ensuring the efficiency and sustainability of Uzbekistan's socio-economic development while using natural resources wisely;
- Maintaining the balance between renewable natural resource production and consumption while managing non-renewable resources and waste efficiently;
- Restoring the regenerative capacity of nature at regional and local levels;
- Preserving the original natural species, their gene pool, and landscape diversity;
- The catastrophic environmental and socio-economic situations caused by the Aral Sea crisis.

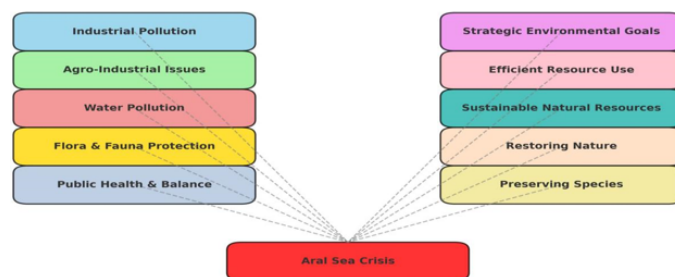


Figure 1. Environmental protection challenges in Uzbekistan

I also researched the air quality of certain cities in Uzbekistan, and the results show that Andijan has an AQI of 188, which is classified as unhealthy. Tashkent follows with an AQI of 166, also categorized as unhealthy. Samarkand has an AQI of 114, making it unhealthy for sensitive groups. Bukhara records an AQI of 102, falling into the same category. Salor has a moderate AQI of 77, while G'azalkent has the best air quality with an AQI of 36, which is classified as good.

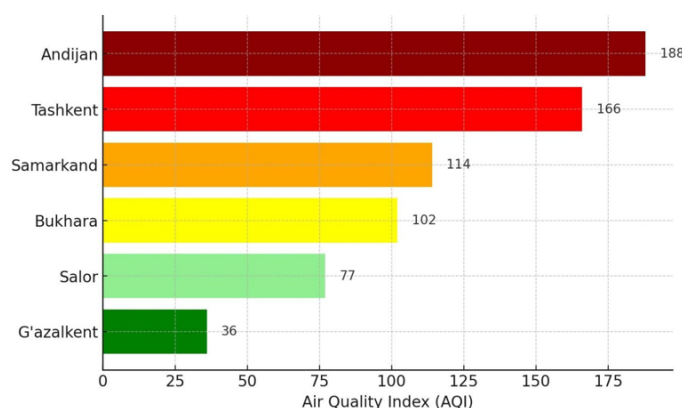


Figure 2. Air pollution levels in Uzbekistan's cities

Dark Red (Unhealthy): 150+ AQI, Orange (Unhealthy for Sensitive Groups): 100-149 AQI, Yellow (Moderate): 50-99 AQI, Green (Good): Below 50 AQI

3 Results

The results of my research indicate that Uzbekistan has proposed some solutions to the aforementioned environmental issues. In Uzbekistan, initiatives such as the Yashil Makon (Green Space) project have been launched to promote environmental protection by planting millions of trees and raising awareness among citizens. When it comes to measures aimed at protecting air from pollution, these approaches are being used: "Car-Free Day!" ("Avtomobilsiz kun") campaign – The goal of this campaign is to reduce the environmental impact of automobile transport and

promote the use of bicycles for a healthy lifestyle. The "European Mobility Week in Uzbekistan" campaign aims to improve the state of the environment. It is organized by the Delegation of the European Union to the Republic of Uzbekistan. The event encourages the public to switch to environmentally friendly modes of transport, thereby helping to reduce greenhouse gas emissions [3].

Raising awareness and conducting educational activities in the field of waste management, reduction, and recycling include:

The "Hashar Week" project aims to increase citizens' responsibility for waste disposal and recycling. The project's main idea is expressed in the slogan: "A place is not clean because it is cleaned from waste, but because no waste is thrown there!" Young volunteers actively participated at 21 waste collection points, explaining the project's purpose. During the week, events were held in four areas: Action, Education, Art, and Business. As part of the "Hashar Week" campaign, more than 1.5 tons of sorted waste were collected, of which 60% was plastic, 35% was paper, and 5% was glass. Additionally, volunteers organized four public lectures and interactive lessons in 22 schools in Tashkent.

Ecological youth expedition to the Ugam-Chatkal National Nature Park – Environmental activists cleaned the natural area along the Gulkamsoy riverbed, which belongs to the forestry enterprise, from waste. "Give Nature a Chance" ("Tabiatga ikon ber") campaign – This is an innovative project by Toshtrangmetzavod AJ XK and the National Environmental Protection Agency. The main goal is to launch the "Toshtrangmetzavod Recycling" company, which focuses on collecting, recycling, and disposing of electronic waste from individuals and legal entities. Additionally, the campaign aims to develop relevant infrastructure in Uzbekistan's capital and other regions.

"Action Plogging" marathon – A marathon where volunteers who care about the cleanliness and well-being of their surroundings actively participate.

"Zero Waste" campaign

Participation in World Cleanup Day - a mass volunteer effort under the slogan "Youth for Cleanliness!" as part of WorldCleanUpDay. Since 2019, Uzbekistan has actively participated in World Cleanup Day alongside the international community. The campaign has been expanding every year. Since 2019, on the third

Saturday of September, waste collection activities have been held across the country involving various social groups. A competition is also announced for the best social video dedicated to World Cleanup Day.

"GO Wasteless" project—Implemented by the Ecomaktab NGO Environmental Resource Center, the project aims to ensure the collection of recyclable waste in the food service sector (HoReCa sector) and create a waste collection and recycling chain using the Wasteless mobile app. The project is being implemented in collaboration with the Ministry of Ecology of Uzbekistan and Coca-Cola Uzbekistan, with financial support from The Coca-Cola Foundation. The ecological campaign PET2NATUREUZ has also been launched as part of the initiative.

Events for Supporting Water Resource Conservation are also being held. The following specific examples can be mentioned:

- "International Amu Darya Day" and "International Syr Darya Day" – As part of events held for schoolchildren and youth, various competitions on water conservation are organized, including drawing, essay, and video contests, as well as races and other activities. For example, a round-table discussion is held in honor of International Amu Darya Day;
- "Tomchi" mobile application—In 2018, the National Water Resources Management Project in Uzbekistan launched the "Tomchi" mobile application under the auspices of the Ministry of Water Resources of Uzbekistan and funded by the Swiss Agency for Development and Cooperation;
- FAO and the Sustainable Development Innovation and Research Cluster are implementing a project on "Effective Management of Digital Agriculture Using Geo-information Systems and Spatial Data." The project aims to further develop smart agriculture by enhancing the capacity and knowledge of local specialists and farmers in the field of spatial data.

Besides, large-scale efforts are being carried out in Uzbekistan to combat desertification. In recent years, vegetation has been planted on 1.7 million hectares of the dried-up seabed of the Aral Sea. Over the next two years, an additional 400,000 hectares of protective "green" zones will be established. To mitigate the consequences of the Aral Sea disaster and preserve biodiversity, more than 3.5 million hectares of natural parks, reserves, and state-protected areas have been

created in the Aral region, according to the publication.

4 Discussion

However, more efforts are needed to educate the broader public. Despite efforts to promote ecological consciousness, several challenges hinder progress:

1. Limited Environmental Education – Ecological subjects are not emphasized enough in school and university curricula.
2. Lack of Public Engagement – Many citizens remain indifferent to environmental issues, considering them secondary concerns.
3. Insufficient Media Coverage—Information about ecological problems is disseminated inadequately through traditional and social media.

However, there are some approaches to enhance ecological knowledge and awareness among the Uzbek population; the following measures should be implemented:

1. Enhancing Environmental Education – Schools and universities should incorporate more comprehensive ecological subjects to instill environmental responsibility in young generations.
2. Utilizing Media for Awareness Campaigns—Television programs, articles, and social media campaigns should be used to spread ecological awareness [4].
3. Organizing Environmental Campaigns and Initiatives – Community-driven programs such as tree planting, waste separation, and water conservation campaigns should be encouraged.
4. Strengthening Public Monitoring and Participation – Citizens should actively monitor environmental violations and report them to authorities [5].

5 Conclusions

Increasing ecological knowledge and awareness among the Uzbek population is crucial for ensuring environmental sustainability. A collaborative effort between educational institutions, media, government agencies, and the public is necessary to build a more ecologically responsible society. By adopting these strategies, Uzbekistan can move towards a greener, more sustainable future. We depend on nature, and we cannot live without it. Therefore, we must all protect

and preserve nature, safeguard every inch of its land as if it were our own eyes, use natural resources wisely, conserve every drop of water, and always take care of nature.

Author Contributions: Conceptualization, R.X.M. and J.M.M.; methodology, J.M.M.; software, M.O.S.; validation, R.X.M., J.M.M., M.O.S.; formal analysis, M.O.S.; investigation, R.X.M.; resources, J.M.M., M.O.S.; data curation, J.M.M.; writing—original draft preparation, R.X.M.; writing—review and editing, R.X.M.; visualization, J.M.M.; supervision, M.O.S.; project administration, M.O.S.; funding acquisition, R.X.M., J.M.M., M.O.S. All authors have read and agreed to the published version of the manuscript.

Funding: “This research received no external funding”

Institutional Review Board Statement: This research did not include any experiments involving human participants or animals, so Institutional Review Board (IRB) approval was not necessary.

Informed Consent Statement: This study did not involve human subjects; therefore, informed consent was not required.

Data Availability Statement: Data supporting the report’s findings can be found [here](#).

Acknowledgments: The authors express their sincere gratitude to Associate Professor (PhD) **Zokirjon Isomiddinov** of Kokand State University for his valuable review of the study’s results and his contributions to its publication.

Conflicts of Interest: The author declare no conflicts of interest related to this study.

References

- [1] Frank Herbert, *Dune*, Hodder Stoughton (1965) [[Scopus](#)]
- [2] 2. Fritjof Capra, "The New Facts of Life," 2008, "CEL | Fritjof Capra - the New Facts of Life." Archived from the original on 2009-08-14. Retrieved 2009-08-20. [[Google Scholar](#)]
- [3] Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan. (2023). National Report on the State of the Environment: Uzbekistan. International Institute for Sustainable Development. [[Google Scholar](#)]
- [4] Rambe, S. A., and Ayla, S. (2024). PROMOTING ENVIRONMENTALLY FRIENDLY BEHAVIOR THROUGH GREEN ECONOMY-BASED ENGLISH LEARNING AT AL WASHLIYAH UNIVERSITY MEDAN. [[Crossref](#)]
- [5] Viale Pereira, G., and Schuch de Azambuja, L. (2021). Smart Sustainable City Roadmap as a Tool for Addressing Sustainability Challenges and Building

Governance Capacity. Sustainability, 14(1), 239.
[Crossref]



Mudarisova Raykhon Khodjayevna -
Candidate of Medical Sciences, Associate
Professor, Uzbek State University of World
Languages.



Mukhammadiyev Jasur Mardon ogli
Uzbekistan State University of World
Languages, Faculty of Translation, Department
of Ecology and Green Resources, Teacher



Sodiqova Mumtozbegim Olimjon qizi 3rd
year student at Uzbek State University of World
Languages