

Article

# Ecological Problems and Their Significance In The Regional Economy

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**Abstract:** It is evident that environmental issues represent a significant challenge to regional economies. This article presents an analysis of the environmental issues that have the greatest impact on regional economies, namely air pollution, water resource pollution and soil degradation. Furthermore, it presents potential solutions and recommendations for addressing these issues. Over the past decade, there has been a notable increase in the level of attention paid to environmental issues. These issues not only have an adverse impact on the global ecological system but also give rise to significant consequences for regional economies. This article will examine the principal environmental issues and analyze the importance of these in the regional economies.

**Keywords:** Environmental Problems, Regional Economy, Air Pollution, Water Pollution, Soil Degradation and Sustainable Development

## 1. Introduction

The environmental problems in the contemporary time are contamination of air and water resources, deterioration of water resources and loss of fertility and the quality of the soils. One of the causative factors to this occurrence is directly human related. The automobile, ubiquitous enough to exceed the capacity of a single entity to monitor it, is a case in point. The next question therefore becomes one of why cars are relevant in the first place. Other factors clearly contribute to this phenomenon. Yet, cars which account for phenomenal demand but an outsized contribution to health and environmental impacts rhyme among the top causes. In addition these factors show that human activities' role in changing the natural resources is tremendous. There are many statistical data corroborating this, as for example the air pollution and the reduction of water resources and the decline in the soil fertility that are getting easier and easier due to this kind of activity.

## 2. Materials and Methods

The objective of this methodology is to investigate the effect of environmental concerns on the regional economy for the period between 2023 and 2024, in efforts to relate such impact on the regional economy. Restoring regional economy stability requires identification of environmental problems, their economic consequences, and then to formulate recommendations on how to achieve stability of the regional economy. In addition, it looks at how detrimental environmental problems are to regional economies, as well as the results.

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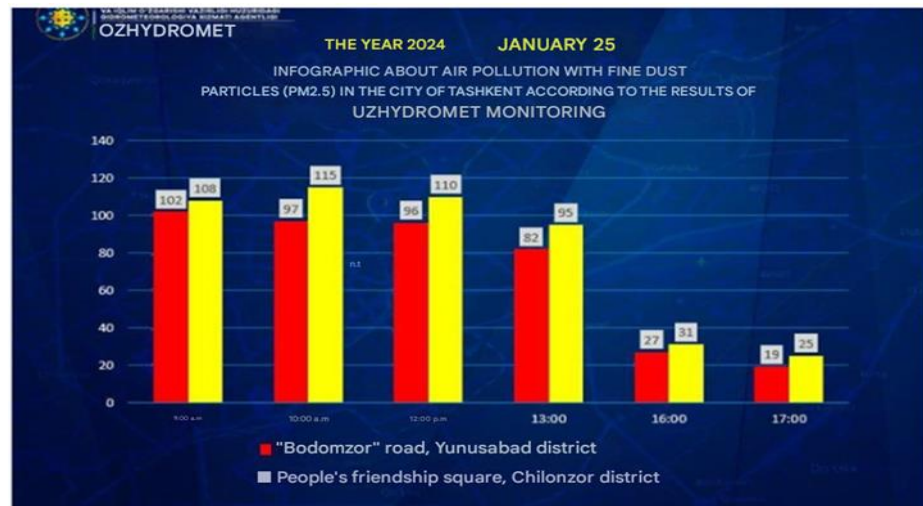
### 3. Results and Discussion

#### Air Pollution

Currently, the biggest sources of air pollution are the industrial emissions, vehicle exhaust and other sources. This pollution not only stands for environment concern problems, but also affects public health and economic efficiency. In regions with elevated levels of air pollution, healthcare costs tend to rise, while labour productivity tends to decline. As evidenced by statistical data, the level of air pollution in Tashkent has increased significantly in recent years. In 2023, it was ranked 22nd in the list of the most polluted capitals in the world. As indicated by data from IQAir, the mean annual concentration of PM2.5 in the city is 5 to 7 times higher than the World Health Organization's recommended threshold.

Weather station	Minimum temperature march 2024 y.	Minimum temperature march 1961-2023 yy.	Maximum temperature march 2024 y.	Maximum temperature march 1961-2023 yy.
Tashkent	-6,3	-13,7/1972	27,7	32,5/1971
Nukus	-7,8	-18,6/1971	28,8	31,4/2008
Urgench	-6,2	-14,0/1998	27,3	32,8/2018
Bukhara	-1,6	-11,9/1969	29,8	35,0/2018
Navoi	-1,8	-9,3/1969	28,0	33,0/2018
Nurafshon	-6,2	-15,0/1972	26,0	34,3/2000
Samarkand	-4,8	-10,0/1972	26,2	32,2/2018
Jizzakh	-4,6	-12,9/1972	27,0	31,5/2000
Syrdaryo	-6,0	-12,3/1972	27,1	32,5/2000
Qarshi	-2,2	-9,3/2005	30,4	36,4/2000
Termez	-3,2	-4,9/1969	30,4	37,3/2018
Andijan	-4,5	-12,9/1972	27,9	30,4/1962
Namangan	-2,6	-11,5/2015	28,0	31,5/1989
Fergana	-2,7	-8,7/1972	27,0	29,0/1962

Comparison of the minimum and maximum air temperatures for March 2024 with the minimum and maximum temperatures for March from 1961 to 2023. <https://hydromet.uz/uz/node/4637>



From 2021 to 2022, the quantity of deleterious emissions exhibited an increase of 47.3%, signifying a rise from 212.4 thousand tons to 403 thousand tons. It is evident that the primary causes of this surge can be attributed to the proliferation of urban transportation, extensive construction projects, and the dearth of green spaces. As the pressure exerted by humans on the natural environment intensifies, the impact on human lifestyles, health, and social environments due to the disruption of the natural balance is becoming increasingly destructive. It is therefore imperative that humanity collectively transcends the myriad of political, regional, racial, national, religious, and other conflicts and disagreements that currently divide us, and instead unites around a common set of universal interests.

#### **Water resource.**

The issue of water resources is of great importance. Furthermore, the efficient utilisation and conservation of water have become imperative. It is becoming increasingly evident that water resources are being subjected to contamination as a result of industrial and agricultural waste, in addition to the presence of untreated wastewater. The classification of wastewater is dependent on the circumstances of its formation. The categories of wastewater include domestic, faecal, atmospheric and industrial. Domestic wastewater is defined as water generated from activities such as showering, washing, bathing, laundering, dining, toilet use, and floor washing. Approximately 58% of these waters are organic and 42% are mineral substances. Atmospheric wastewater is defined as water that flows from precipitation, such as rain and snowmelt, across the territory of the enterprise. Such wastewater is contaminated with both organic and mineral additives. Industrial wastewater is generated during the processing and extraction of organic and inorganic raw materials.

(<https://researchedu.org/index.php/goldenbrain/article/view/1723/2188>)

This situation has resulted in considerable economic losses for sectors such as agriculture and fisheries. The reduction in drinking water and the absence of water treatment technology in Uzbekistan are the primary factors contributing to the observed increase in these indicators.

#### **Soil Degradation**

Soil degradation can be attributed to a number of factors, including deforestation, overgrazing, and the implementation of poor agricultural practices. This has the effect of reducing soil fertility, which in turn threatens food security. Furthermore, issues pertaining to salinity and soil nutrient depletion emerge. Statistical data indicates that salinity affects more than 50% of agricultural land in Central Asia. In Uzbekistan, 40% of irrigated land is saline, which has a detrimental impact on the production of cotton and

grains. It is estimated that 52% of the world's agricultural soils require the addition of organic matter. The fertility of these soils is in decline on an annual basis.

#### **Solutions and Recommendations**

- The effects of environmental issues have to be evaluated in direct and indirect ways. Following is an example where it not only impedes public health but it also attenuates ex post financial constraints on the healthcare system and diminishes production efficiency. However, climate change poses significant risks to agriculture, the energy sector, and other key economic sectors, with dire impacts on food security, employment and economic stability.
- However, there is no doubt that the regional economy needs to have developed green technologies to ensure environmental sustainability at the region.. New ways of economic growth are existed from the transition to renewable energy sources, the resources' conservation and the development of environmentally friendly industries. It includes, in other words, environmental security assurance as well as economic growth stimulation and the provision of new employment, as well as resource efficient practice.
- Sustainable management of natural resources is essential for the operation of regional economy.. Resource depletion and the guarantee of their restoration are still of major importance. As an implication of ecological risks, such as loss of water resources, land and forests, effective management systems and government policies should be implemented. Conservation and rational use of natural resources must be linked to the sustainable development of regional economies.

#### **4. Conclusion**

Finally, environmental problems have an effect on the regional economy beyond the state of the environment, to economic stability and long term growth. These issues can be resolved, natural resources can be better used and environmentally friendly technologies introduced to increase the efficiency of regional economies. In parallel, mitigation of climate change, environmental pollution, resource depletion and biodiversity loss is required from both ecological and economic perspective. For the sustainable development of regional economies it is a prerequisite to solve the environmental issues. Ecological sustainability, ecology healthy natural resources and eco safe technologies can help in carrying out economic growth. Long term this will positively impact environmental conditions and to some degree improve social justice, increase economic stability, and spur innovative growth. Thus, it is just necessary to address the environmental issues and to make the transition to a sustainable economy on a regular basis.

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