

### ISSN: 1533 - 9211 THE GLOBAL ENVIRONMENTAL PROBLEMS, ENVIRONMENTAL MANAGEMENT TASKS FOR THEIR SOLUTION

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### Abstract

The article pays great attention to the tasks of environmental management, reveals its peculiar features and emphasizes that the use of nature, the laws of organization, human influence, the scientific basis for the proper use of natural resources, forecasting changes occurring in nature in human economic activity, the influence of the atmosphere, water, complex biogeochemical circulation involving flora, fauna, production and other natural factors and phenomena should contribute to the analysis of key economic indicators and their adaptation to human economic activity. We must take into account its prospects for future generations, we must set goals for ourselves, and it is imperative to discuss them and must take into account the interests of our children. as a result,

**Keywords:** Environmental crisis, management, environmental management, natural resources, legal framework, ecologization of the economy.

### Introduction

The high level of economic growth characteristic of the countries of the world at the end of the 20th and the beginning of the 21st centuries is determined by the conduct of the business activity, which affects all aspects of society and plays an important role in environmental management, which is one of the elements of the social responsibility of business entities. Business, which has become the reason for increasing the importance of environmental management, having a direct connection with the material and spiritual well-being of the population, creates the basis for meeting the material, social and intellectual needs of individuals, reduces economic inequality and eliminates unemployment. In this sense, environmental management is aimed at creating an optimal socio-economic environment for farming. That's why,

The President of the Republic of Uzbekistan noted that "Over the past 150 years, the living cover of coral reefs in water bodies has doubled and decreased due to global warming - they are drying up and discolouring. The salinity of the oceans is increasing. Glaciers are melting at a tremendous rate. This increases the likelihood that ocean waters will rise and flood areas near the water's edge, causing heat to dissipate relatively to moisture.

Wildlife is declining - over the next 10 years, the diversity of wild animal species could be reduced by a quarter.

Excessive pollution of soil, water and air, climate change, and alarming changes in flora and fauna make the environmental problem one of the factors that pose a serious threat to the



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# Methodology

In Uzbekistan, over the years of independence, significant steps have been taken to preserve the sustainability of the natural environment and the efficient use of natural resources, as well as to ensure the environmental safety of the population by following the principles of environmental management. Paying attention to the preservation of the environment, the President of the Republic of Uzbekistan noted that: "... priority tasks require further improvement of the public management system based on today's and tomorrow's requirements" [2], in particular, environmental management in industries and sectors of the economy, in the process regulation and management of the type of activity of farms. It is especially noteworthy that in this regard, a qualitatively new phase has begun in the Action Strategy [3] in five priority areas in the development of the Republic of Uzbekistan in 2017-2021. The formation and development of environmental management in the republic testifies to the need to solve the problem of managing spirituality, education, science, culture, environmental protection, the use of land and water resources, the conservation and reproduction of rare plants and animals, waste management and emissions into the atmosphere. Therefore, in recent years, in the socioeconomic development of the country, much attention has been paid to the gradual and conscious application of the environmental management system. This testifies to waste and emissions management. Therefore, in recent years, in the socio-economic development of the country, much attention has been paid to the gradual and conscious application of the environmental management system. This testifies to waste and emissions management. Therefore, in recent years, in the socio-economic development of the country, much attention has been paid to the gradual and conscious application of the environmental management system. This testifies to the relevance of the issue [3].

The ongoing changes in the development of world-class achievements in science and technology should be focused on the prospects for the development of the country's economy, taking into account its impact on the environment and the integration of economic and environmental policies. Because even in economically developed countries, the deterioration of the environmental situation and the phenomena and processes associated with environmental management will have a negative impact on economic growth rates. Therefore, the task is to focus on the growing needs of the world community and the development of the economy, on the increasingly efficient use of a large number of natural resources, which is reflected in environmental management [4,5,6,7,8,9].

In the course of the development of human society, a man strongly influenced nature and the environment from the very beginning of its formation. However, this influence reached a truly tangible scale only in the eighteenth century, with the beginning of the industrial revolution. At that moment, the man left the natural circulation of wildlife and began to dictate his own rules to the planet.

A person already feels and was a witness to the changes of the planet, but far away at once our world was busy with other things: outside the planned mining and natural resources of metal





and other minerals. All these substances, derived naturally by nature and seized by man, returned to nature, but in a different form. These actions led to global pollution of soil, water and air and became the cause of ecological imbalance. And the intensity of this process continues to grow at a catastrophic pace, and the serious consequences of the ecological crisis will have to be eliminated by mankind in the near future. The difficult political background of the twentieth century (the split of the world community and world wars) did not really help humanity to focus on environmental problems. All these factors have led to

### **Results and discussion**

This phenomenon requires the members of society, manufacturers, and entrepreneurs to be extremely careful and reasonable. Currently, in the context of the formation and development of environmental management, several studies are being carried out to develop the real sector of the economy and improve the efficiency of investment activity, taking into account environmental requirements. Research is being conducted in this area to answer the following questions: how to increase the environmental awareness of producers and how to manage investment activities in a globalized and liberalized economy; how to improve the activities of enterprises based on the principles of environmental motivation; taking into account innovative developments in the use of natural resources, how to solve prevention problems; how to implement business strategies taking into account environmental impacts, sequences and systems of responsibility; development of environmental management based on new promising types; scientific research is being carried out in priority areas based on new and advanced environmental management technologies in the field of natural resource use [,16,17,18,19,20]. **How to be? What to do? What decisions need to be made to eliminate environmental problems?** 

In recent years, the first programs began to appear, aimed primarily at protecting (saving) the environment, however, by the end of the century it became clear that humanity needed more radical and effective measures. In recent years, or rather after 2010, humanity has realized the danger of the current environmental situation in the world and has begun an active struggle for the protection and restoration of our nature [21,22,23,24].

In Uzbekistan, to improve the quality of the environment, it is necessary to implement the following measures by 2030 [25]:

In the sphere of solving global environmental problems, developing international cooperation and fulfilling the obligations assumed by the republic:

- approval of the National Program for the implementation of the requirements of the Montreal Protocol to phase out the use of ozone-depleting substances in the new edition and the "Roadmap" for its implementation;
- development and adoption of the National Action Plan for the implementation of the Paris Agreement;
- expansion of the legal framework for cooperation in the field of environmental protection with interested states;





- studying the feasibility of joining the Republic of Uzbekistan to the Kigali Amendment to the Montreal Protocol, the Aarhus Convention, the Convention on Long-range Transboundary Air Pollution and its main protocols, the Convention on the Transboundary Effects of Industrial Accidents, the Minamata Convention on Mercury, the Rotterdam Convention on the Prior Informed Consent Procedure for certain hazardous chemicals and pesticides in international trade, the Convention on Environmental Impact Assessment in a Transboundary Context and the Protocol on Strategic Environmental Assessment, the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes and other international agreements;
- ensuring effective long-term strategic partnership with international financial organizations, and donor countries, improving the system for preparing investment projects and international technical assistance projects;
- ensuring the development and improvement of bilateral relations with neighbouring states in the field of:
- reducing the risks of exposure to chemical, biological, and radiological materials;
- formation of a register of transboundary environmental problems and their monitoring systems, joint assessment of the environmental impact of border facilities, development of early warning indicators;
- creation of transboundary protected natural areas;
- joint development and adoption of uniform regulations, and environmental quality standards, as well as training of specialists in the field of environmental protection according to a uniform methodology for the countries of the region;
- management of transboundary river basins and creation of a unified integrated monitoring system for transboundary surface watercourses in Central Asia;

# In the field of reducing the level of desertification and land degradation, and restoring the quality and fertility of land:

- building capacity to implement integrated planning and land management;
- ensuring sustainable management of forest resources, pastures and livestock, as well as water and land resources;
- increase in the area of forest plantations on the Uzbek side of the dry part of the bottom of the Aral Sea;
- development and implementation of a complex of forest reclamation measures with the creation of a system of field-protective and bank-protecting forest belts, terracing of mountain slopes, with the creation of forest and fruit plantations;
- ensuring the widespread introduction of crop rotation in the cultivation of agrotechnical crops;
- development and implementation of a program for the restoration and reclamation of disturbed lands;
- ensuring the reconstruction and restoration of the collector-drainage network for the purpose of land reclamation improvement, as well as the construction of new reservoirs to increase the water supply of irrigated lands;





- ensuring the phased replacement of mineral fertilizers with organic fertilizers and the widespread introduction of biological pest control methods;
- development and adoption of a regulatory framework for the development of organic agricultural production;

Table 1. Dynamics of the volume of captured and neutralized pollutants from the total amount formed in the Republic of Uzbekistan.

Regions	Captured and neutralized, thousand tons									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
The Republic of Uzbekistan	1997 ,7	2181	2757, 7	2572, 1	2355, 7	4082	3757, 1	5034, 5	5478, 5	5508, 5
Republic of Karakalpagis tan	5,7	4,3	3,3	7,4	7	8	10,1	14,4	13,2	12,3
areas:										
Andijan	18,5	14,2	12,2	8,5	12,8	18,2	9,2	10,3	5,3	7
Bukhara	4,3	5,3	3,6	3,1	2,8	2,5	2,5	2,6	0,6	0,6
Jizzakh	4,7	3,8	2,4	3,7	2,8	1413, 3	1226, 9	814,1	62,2	176,5
Kashkadarya	44,8	44,9	39,9	38,5	51,8	53,1	45,1	27,6	28,4	121,6
Navoi	804, 7	824,3	812,6	874,2	851,4	863	660,1	632,6	606,7	664,6
Namangan	5,2	5,1	5,1	5	5,3	3,2	2,9	3,7	1,9	1,6
Samarkand	22,5	22,8	23,2	22,9	22,3	17,3	16,9	12,3	8,2	10,3
Surkhandary a	1,9	2,3	2	1	0,8	0,9	0,8	1644, 7	2366, 1	2518
Syrdarya	6,5	26,1	0,1	19,5	16,5	16,3	1,5	1,9	0,5	0,2
Tashkent	952, 4	1131, 3	1721, 5	1476, 2	1265, 4	1567, 6	1664, 9	1756, 7	2299, 3	1911, 3
Ferghana	113, 8	82,8	118,6	99,4	105	107,4	105,7	104,1	79,5	80,2
Khorezm	6,4	6,4	6,9	6,3	6,4	5,8	6,7	6,1	4,7	2,8
Tashkent city	6,3	7,4	6,3	6,4	5,4	5,4	3,8	3,4	1,9	1,5

The table shows that in recent years the leadership of the Republic of Uzbekistan has paid great attention to improving the environmental

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attention to improving the ecological balance. You can pay attention to the figures in table No. 2, that in Surkhandarya, Tashkent regions, the dynamics of the volume captured and neutralized and pollutants from the total amount formed in the Republic have changed dramatically in the last 2018, 2019 and 2020. This happened due to the implementation of comprehensive measures by the government of the Republic of Uzbekistan. If counted by republic dynamics volume of captured and neutralized pollutants out of the total amount formed in the Republic increases by 275.7 per cent compared to 2011.

Table 2. Dynamics of the volume of captured and neutralized pollutants out of the total amount formed in individual cities

	As a percentage of the total amount of waste hazardous substances from									
Areas	stationary sources									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Tashkent	20.3	24.4	21.1	20.2	18.5	18.7	12.5	27.2	6.2	4.8
Almalyk	66.6	66.8	64.1	61.0	68.9	81.4	80.9	83.6	85.9	76.5
Angren	85.7	86.5	83.4	86.7	85.3	86.4	87.4	88.7	88.1	86.7
Andijan	20.5	21.6	13.4	37.3	12.9	15.4	15.7	16.5	15.6	17.1
Bekabad	95.0	95.6	90.7	87.7	87.6	96.4	96.0	89.2	93.2	90.6
Kokand	74.7	82.4	46.6	45.3	29.6	43.8	92.3	60.5	48.3	16.8
Navoi	95.2	95.7	95.5	95.8	95.6	95.6	97.4	95.9	97.3	96.9
Samarkand	22.6	34.5	35.7	34.9	35.9	28.0	27.9	17.9	8.3	9.9
Fergana	16.6	24.7	32.9	19.8	18.6	7.0	8.7	9.6	8.5	10.6
Chirchik	78.6	79.1	75.7	79.6	78.6	81	80.9	79.9	80.5	80.1

(in per cent)

According to table No. 2, it can be seen that the volume of captured and neutralized pollutants out of the total amount formed in the Samarkand and Fergana regions is more in percentage compared to 2018 and 2019.

- ensuring the reduction of emissions of pollutants into the atmospheric air;
- increasing the share of renewable energy sources in the overall structure of generating capacities;
- encouraging measures to improve the energy efficiency of buildings, encouraging the use of low-carbon technologies (heat pumps, renewable energy sources) and cleaner fuels in individual households;
- further development of the railway network and facilitation of the transition from road to rail transport of passengers and goods;
- transfer of transport to gas-balloon fuel, electric traction and other alternative fuels, as well as the organization of appropriate road infrastructure;
- adoption of standards for wheeled vehicles, as well as motor fuel of ecological class "Euro-6";
- ensuring the development and adoption of specific standards for emissions of pollutants generated during the generation of electrical and thermal energy;





- creation of inventories of emissions of pollutants, including by sectors of the economy;
- revision of state standards for solid heating oil, taking into account environmental aspects;
- ensuring the enrichment of hard coal mined in the republic in order to increase its calorific value and reduce the ash content;
- ensuring competent organization of traffic by reducing the number of intersections of transport and pedestrian flows, reducing the level of congestion of highways, optimizing the composition of the traffic flow, speed limit, regulation cycle, creating separate lanes for passenger traffic, organizing separate bicycle lanes;
- ensuring the use of newly commissioned production facilities of dust and gas trapping installations at stationary sources of atmospheric air pollution with an efficiency of at least 9.5%;
- ensuring the use of dust and gas trapping installations at stationary sources of atmospheric air pollution with an efficiency of at least 95%;

In the field of conservation and reproduction of biological resources, as well as improving the quality and volume of the forest fund:

- increase in the areas of protected natural areas of I-V categories by adequately covering all types of ecosystems and ensuring the ecological connection of the entire network of protected natural areas;
- introduction of technology for the conservation of rare and endangered species of wild animals and wild plants in genetic banks;
- development and implementation of a unified system of measures aimed at strengthening biological safety, including control over the import and spread of alien species that can harm natural communities and crops;
- ensuring the creation of a unified information database of state cadastres of objects of flora and fauna, protected natural areas and their monitoring based on modern information technologies;
- inventory of natural reserves of wild species of medicinal, food and industrial plants;
- creation of a system for collecting taxes and duties, stimulating the use of objects of biological diversity grown in nurseries and reducing the volume of their removal from the natural environment;
- expansion of existing and organization of new nurseries for the breeding of objects of the animal world that are on the verge of extinction;
- increase in the release into the wild of nursery-bred bustards listed in the Red Book;
- increase in the number of goitered gazelles in the Bukhara specialized nursery "Dzheyran" and the organization of new populations of goitered gazelles in the newly created protected natural areas;
- development of a mechanism for assessing the economic value of biological diversity and ecosystem services;
- creation of "green belts" around the regional centres and large cities of the republic;
- increase in the territory of the forest fund covered with forests;
- conducting an inventory of the forest fund in order to create an atlas of the republic's forests;





- development and implementation of new methods of combating pests and diseases of forests, with the predominant use of biological and environmentally friendly methods;
- improvement of scientific and breeding work to improve the qualitative composition of the forest fund and increase its resistance to pests and forest diseases;
- improving the quality of forest plantations and diversity of species by increasing the level of mechanization and introducing new technologies for creating forest plantations, including the use of genetically modified organisms;

In the field of reducing the volume of generation and reduction of existing volumes of industrial waste, including the prevention of the negative impact of hazardous waste on public health and the environment:

- introduction of a waste classification system based on industries and/or chemical-physical parameters;
- providing economic incentives for the introduction of waste-free and low-waste technologies in production, including through the provision of preferential loans;
- stimulating the development and implementation of technologies for the processing and disposal of waste from mining and processing industries;
- ensuring the development, adoption and implementation of the National Action Plan to meet the requirements of the Stockholm Convention on Persistent Organic Pollutants;
- ensuring the phased elimination or environmentally safe disposal of chemicals that are unsuitable for use in the treatment of crops;
- ensuring the organization of environmentally safe storage of hazardous waste at industrial facilities;
- organization of a system for the collection, use and/or disposal of goods that have lost their consumer properties and contain hazardous substances (mercury-containing lamps and devices, batteries, accumulators, etc.);
- organization of a system for the collection, neutralization, disposal and disposal of medical waste;
- ensuring the development and implementation of a targeted program for the conservation of special landfills intended for the disposal of pesticides and other toxic substances, including the complete reclamation and environmental rehabilitation of the Chorkesar and Yangiabad facilities;

# In the field of greening the economy:

- optimizing the use of resources and improving the efficiency of environmental activities, as well as the creation of "green infrastructure";
- transforming the national economy focused on the careful use of water, encouraging, stimulating the development and widespread introduction of renewable energy technologies, as well as buildings based on high energy efficiency standards;
- ensuring the integration of environmental aspects into the sectoral policy of the state, including through the introduction of a mechanism for strategic environmental assessment of plans, programs and other strategic documents, as well as environmental impact assessment of individual projects;





- development of parameters for assessing the restoration opportunities and potential capacity of ecosystems and the introduction of a procedure for taking these parameters into account when planning the socio-economic development of the country;
- introduction of a system of environmental insurance and environmental audit of the activities of economic entities;
- ensuring the transition to international standards (United Nations Economic Commission for Europe, EU and others) in priority areas that determine the quality of the environment;
- expanding the use of environmental standards in public procurement;
  - In the field of using economic mechanisms for nature management:
- full implementation of the "polluter pays" principle, ensuring that the amount of payment for emissions and discharges depends on their volume and the danger to the environment and public health;
- introduction of a mechanism for effective control over emissions and discharges with optimization of the number of controlled pollutants based on European standards;
- creation of a system of taxes and duties stimulating the use and import of environmentally neutral technologies, goods and services;
- ensuring the development and implementation of effective methods for calculating the damage caused to the environment by economic activity;
- development and adoption of regulations that encourage the use of renewable energy sources, including through the introduction of a special purchase tariff for the supply of electricity generated from renewable energy sources to the grid ("green tariff");

In the field of implementation of the functions of state environmental control:

- a clear delineation of functions and tasks, as well as ensuring the coordination of actions of state bodies in the field of environmental protection through the development and adoption of the Environmental Code of the Republic of Uzbekistan;
- ensuring optimal centralization of all supervisory functions in the field of ecology within one state body, with the elimination of duplication;
- ensuring adequate budget financing of environmental protection, including terms equipping control structures with modern means of mobile analytical control over the level of environmental pollution;
- ensuring the updating of specialities, curricula and training programs for specialists in the field of environmental protection, improving the system of personnel training, including with the involvement of foreign specialists;
- introduction into the practice of creating environmental services by economic entities belonging to categories I and II of environmental impact, with mandatory periodic advanced training;
  In the field of state environmental expertise and environmental certification:
- a critical review of the regulatory framework governing the conduct of state environmental expertise, including the system for determining the category of environmental hazard of economic entities based on international standards;
- transition to the principle of "using the best available technologies";





- introduction of modern information technologies for modelling the impact of objects of expertise, as well as access to the results of environmental impact assessment of economic entities;
- ensuring the transition from the method of individual determination of environmental standards to the sectoral one;
- determination of exact criteria for quoting emissions, discharges of pollutants, as well as disposal of waste from ecological and economic areas;
- creation of an effective mechanism of post-expert control;
- introduction of international standards for the creation of an environmental management system and the introduction of a mechanism for mutual recognition of works on environmental certification with the CIS countries, the EU and other countries;
- ensuring the accreditation of the environmental certification body and the testing laboratory at the international level for the recognition of environmental certificates and test reports abroad;
- ensuring harmonization of existing standards with international standards ISO (International Organization for Standardization) and IEC (International Electrotechnical Commission);
- improvement of the environmental certification system, including wheeled vehicles;
- ensuring the creation and accreditation of a laboratory for determining the environmental class of cars;

## In the field of the state environmental monitoring system:

- cardinal improvement of the material, technical and methodological support of the laboratories of the involved ministries and departments;
- creation of a system of posts for automatic measurement of atmospheric air pollution within the republic;
- provision of automatic systems for the analysis of emissions into the atmosphere from priority stationery (organized) sources and discharges into water bodies from pollution sources of economic entities belonging to category I of environmental impact;
- development and implementation of a modern information system for collecting data on the results of monitoring of the involved ministries and departments, as well as business entities;
- creation of an electronic environmental map of the republic to ensure openness and transparency of information on the state of the environment and possible environmental threats;
- Ensuring monitoring coverage of the level of air pollution by suspended solid particles with an aerodynamic diameter of not more than 10 microns (PM10), including particles with an aerodynamic diameter of not more than 2.5 microns (PM2.5);
- improving the system of indicators for assessing the state of environmental objects and developing criteria for the effectiveness of the implementation of environmental measures;
- providing state bodies, public organizations and the population with reliable information about the state of the environment;

### In the field of scientific support of environmental protection:

 development and improvement of the system of exchange of scientific and technical information;





- creation of a mechanism that ensures the transformation of scientific ideas into specific industrial designs of environmental protection equipment and their implementation in the technological process;
- ensuring the development of environmentally friendly and resource-saving technologies, industries, types of raw materials, materials, products and equipment;
- ensuring research on the vulnerability of natural systems and sectors of economic activity in relation to possible global and regional climate changes, development of scientific bases for determining environmental risks;
- providing an analysis of the spread of alien and genetically modified species of living organisms and the development of appropriate methods for controlling and reducing the level of negative consequences of these processes;
- organization of systematization of accumulated knowledge and coordination of scientific research in the field of environmental protection;
- providing scientific and methodological substantiation of new water consumption standards, quality standards for water supply sources and drinking water;
- development of a methodology for ecological zoning of territories, as well as revision of the criteria for assessing the degree of pollution of water bodies and drinking water in order to determine the most dangerous territories for health;

In the field of participation of civil society institutions in matters of environmental protection, as well as the creation of a continuous system of environmental education:

- regular preparation and publication of national reports on the state of the environment and the use of natural resources;
- creation of an effective mechanism for ensuring mandatory public participation in the adoption of environmentally significant decisions;
- creation of a mechanism for conducting public hearings and public environmental review of environmental impact assessment projects for the proposed types of activities related to categories I and II of environmental impact (high and medium risk), prior to the state environmental review;
- ensuring the improvement of the institution of public environmental inspectors;
- improving the system of continuous environmental education by introducing issues of ecology, environmental protection and sustainable development into curricula at all levels of education;

### Conclusion

In conclusion, we want to say that, apart from global plans, there is the responsibility of each of us - every inhabitant of the planet. To save it for future generations, do not be lazy to follow a few simple universal rules: throw away batteries in special containers, refuse disposable bags (buy cloth, it will be cheaper), give unnecessary things to the poor, sort waste and teach these simple recommendations to your children. However, it is worth recognizing that in the 21st century we have made significant progress in terms of awareness of the problem and activity. Despite all the damage we have done to our planet, we still have enough chances to return it to its previous form.





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