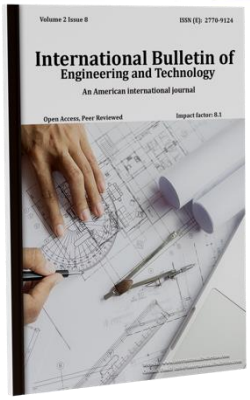

LEGAL ENSURANCE OF ENVIRONMENTAL SAFETY AND ITS ROLE ENVIRONMENTAL LAW IN CLIMATE CHANGE CONDITIONS: CHALLENGES, THREATS AND PROSPECTS

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Abstract: The article is dedicated to the current challenges and opportunities faced by environmental law in the context of global climate change. This work analyzes the main challenges to environmental law, including the need for international cooperation, the renewal of legislation, and the balance of interests. International cooperation, including the participation of organizations such as the UN, is becoming a key factor in combating climate change. The conclusion emphasizes the need to create effective legal frameworks and sound initiatives to achieve a sustainable future, as well as recommendations for actively involving all stakeholders in environmental protection.

Keywords: environmental law, climate change, environmental safety, climate safety, climate dialogue, environmental threats.

Today, a situation has developed in society where the development of human civilization puts people's survival in real danger of an ecological catastrophe. Climate change has become one of the most serious threats facing humanity. Increasing temperature, rising sea levels, extreme weather phenomena, and changes in biosystems all require a new approach to environmental protection. That is why environmental security problems can be solved through the joint efforts of states, for which their unity and international cooperation are necessary.

The relevance of environmental issues in the context of climate change has increased since the entry into force of the Paris Agreement on Climate adopted in 2015[1], according to which the participating states commit to ensuring a reduction in global greenhouse gas emissions and limiting the increase in global temperature to 2°C. As one of the measures to adapt to climate change, a growing number of states are transitioning to a low-carbon economy. As a continuation of the Kyoto Protocol and the Paris Agreement, the Climate Conference (COP26) was held in Glasgow in November 2021, where representatives of the states once again discussed the agreements on the Paris Agreement. Following the conference, the Glasgow Climate Pact[2] was adopted, within the framework of which all parties agreed to revise their current emission targets for 2030 in 2022 and strengthen them. Despite the fact that this document was adopted in the context of global tension, the Glasgow Pact should give impetus to the work on long-term strategies to reduce the carbon intensity of the economy and maintain their relevance.

Environmental lawis a set of norms regulating relations arising in the process of using and protecting natural resources and environmental protection. In the context of climate change, it is becoming particularly important, as the need to protect the environment is becoming more urgent than ever[3].

Climate change is caused by human activity, especially greenhouse gas emissions. The main consequences of climate change include: -Increasing temperature on the planet; - Increase

in frequency and intensity of climatic phenomena (storms, floods, and droughts) - Threat to biodiversity and ecosystems. These factors affect human health, the economy, and social stability. Today, environmental law faces a number of **challenges** in the context of climate change:

1.Necessity of international cooperation. Climate change problems are global in nature and require joint efforts from countries. The 2015 Paris Agreement became an important milestone in international law, however, its implementation remains under threat. Many countries are failing to meet their carbon reduction commitments.

2.Need to update legislation. The existing norms of environmental law are often outdated and do not meet the requirements of the time. The need to develop new standards and protocols that define responsibility for causing environmental damage and ways to adapt to climate change is becoming clear.

3.Balance of interests. Environmental interests often conflict with economic interests. This conflict is most acutely manifested in the development of natural resources such as oil and gas, which requires compromise.

In the context of climate change, **environmental law** must adapt and develop in several directions:

Integration of sustainable development principles. Sustainable development implies a balance between the economy, ecology, and the social sphere. Environmental law should provide conditions for achieving this balance, including the development of technologies aimed at reducing emissions and efficiently using resources.

Development of new regulatory acts. Considering the scale of the threats, it is necessary to create new legislative initiatives. This may include emission reduction commitments, as well as climate change adaptation measures, such as improving infrastructure that meets new climate conditions[4].

3.Improving the mechanisms of responsibility. Responsibility mechanisms for adverse impacts on the climate should be improved. This includes both legal and financial liability, which can be implemented through environmental taxes and fees.

Climate change and environmental degradation constantly **threat** human rights. Clean air, access to water, and healthy food are fundamental human rights that can be violated in the context of climate change. Human rights organizations play an important role in protecting human rights in the context of environmental problems. They may draw attention to violations of rights related to pollution and deterioration of living conditions. Environmental law should take into account aspects of human rights. For example, when establishing norms regarding the use of natural resources, it is necessary to consider the interests of local communities.

Many countries are beginning to develop and implement effective climate change strategies integrated into environmental law. For example, Scandinavian countries are successfully using carbon tax, which contributes to emission reduction. Also, renewable energy projects are actively developing in Germany, which helps reduce dependence on fossil resources[5].

To date, 783 million people are experiencing chronic hunger. The rise in global temperature by 2°C will lead to the death of another 189 million people from hunger. If the temperature rises by 4°C, this figure can reach an astonishing 1.8 billion people. Every year, more than 20 million people are forced to leave their homes and move to other regions of their countries due to dangers caused by extreme weather phenomena, such as abnormally heavy

rains, prolonged droughts, desertification, environmental degradation, rising sea levels, and cyclones[6].

According to experts, limiting global warming to 1.50°C will require active, rapid actions related to the transition to new processes in the energy, land, industrial, transport systems, and infrastructure of settlements. It is necessary to reduce carbon dioxide emissions caused by anthropogenic activity by 45% by 2030 compared to 2010 levels, which will allow achieving "clean zero" only by 2050[7].

As noted in UNEP documents, new consumption models, called "sustainable consumption," depend on conscious choices made by consumers, which requires changing the entire production cycle: from the design, development, and use of safe goods and services manufactured using energy- and resource-saving technologies[8].

Climate security is a concept that ensures the safety of the population and states in the context of climate change, including environmental protection, social stability, and economic development. The Climate Security Concept emphasizes that climate change has serious consequences for the security of people and states. For example, rising sea levels can lead to flooding of coastal areas and mass migrations of people, causing conflicts and social instability. Extreme weather events, such as storms, floods, and droughts, can also lead to infrastructure destruction, reduced agricultural productivity, and threats to public safety[9].

Therefore, Uzbekistan is taking active measures to ensure environmental sustainability and improve the quality of the environment to overcome the negative consequences of environmental problems. Uzbekistan is actively promoting important climate initiatives aimed at uniting the region to combat climate change.

The ideas of the President of Uzbekistan Shavkat Mirziyoyev are constantly supported by the countries of the region. As a logical continuation of forming a unified climate agenda for Central Asia, Uzbekistan, at the fifth meeting of the heads of state, put forward an initiative to develop a Regional Climate Change Adaptation Strategy[10].

In addition, the head of Uzbekistan proposed to create a multilateral platform at the level of environmental ministers "Central Asian Climate Dialogue," which could become an integrating link for the countries of Central Asia on the path of "green" development. Also, Shavkat Mirziyoyev put forward several proposals at the UN Climate Change Conference (COP28) [11].

In particular, the President of our country advocated for the speedy coordination of the Global Framework for Climate Change Adaptation within the framework of the Paris Agreement. The President also touched upon the topic of the global transition to a low-carbon economy. According to him, this process "must be fair, transparent, and inclusive," and "must take into account the interests of developing countries." He proposed to regularly consider this pressing issue, including including its inclusion in the agenda of the G7 and G20 formats. It is important that Uzbekistan adopted a strategy for transitioning to a "green" economy for 2019-2030. The main objectives of this strategy are: Conservation of natural resources: modernization of irrigation systems, implementation of water-saving technologies. Using alternative energy sources: expanding the use of solar, wind, and biomass energy. Implementation of energy-efficient tools in economic sectors: increasing energy efficiency in the production and service sectors.

The "Uzbekistan-2030" Strategy, adopted by the Decree of the President of Uzbekistan on September 11, 2023, identified water conservation and environmental protection reforms

as one of the priority areas, and within the framework of the strategy, a number of measures are envisaged, which are currently being effectively implemented[12].

On the basis of the WMO, cooperation is carried out in the field of meteorology, climatology, and hydrology. One of the important international non-governmental environmental organizations is "Greenpeace." Its activities include the implementation of environmental programs, informing the population about possible and existing environmental problems, protecting citizens' rights to a favorable environment, and attracting supporters to participate in environmental programs[13].

The problem of global climate change, according to scientists, arises in connection with the expected warming, the cause of which is considered to be technogenic **emissions of greenhouse gases**, endowed with the ability to retain thermal radiation from the planet's surface heated by the Sun. The increase in greenhouse gases can lead to continued warming, which can lead to the melting of polar ice, rising World Ocean levels, desertification, and a 20-25% reduction in summer rainfall on agricultural lands. Scientists estimate that by 2040, the amount of CO2 in the atmosphere will double. Consequently, the climate will change from 1.5 to 4.50 degrees. By 2040, the sea level is also expected to rise from 8 to 30 cm. Currently, China and the USA have the highest share of emissions[14].

Next global environmental problem is considered to be **desertification**. It arises as a result of global warming, deforestation, lack of fresh water, and intensive use of fertile lands. In Russia, about 50,000 hectares of land are no longer used for agriculture annually due to soil degradation, leading to the disappearance of pastures. As a result, there is a threat of hunger and water shortage, which is manifested in the growth of infectious diseases. To prevent desertification, the UN Convention to Combat Desertification in the States where such a problem is more widespread was adopted in 1994 in Paris[15].

Therefore, pastures have socio-economic significance, being one of the main natural resources in maintaining ecological balance in our region, ensuring food security, developing livestock farming, and improving the living standards of the population of the Republic of Uzbekistan. Considering the importance of pastures in our country, a special Law of the Republic of Uzbekistan "On Pastures" was adopted, which was adopted by the Legislative Chamber on April 2, 2019, and approved by the Senate on May 3, 2019[16].

The Law defines pastures as lands with natural vegetation that serves as fodder for livestock. They are subdivided into desert, semi-desert, foothill, mountain, and plain, with and without water. In addition, a special Decree of the President of the Republic of Uzbekistan dated February 16, 2023, "On Additional Measures to Protect and Ensure the Rational Use of Pastures," was adopted [17].

Another serious environmental problem is the reduction of **biodiversity**. To address the problem of biodiversity conservation, the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan "On Approving the Strategy for the Conservation of Biological Diversity in the Republic of Uzbekistan for the Period 2019-2028" was adopted [18].

Within the framework of this strategy, biodiversity conservation issues were included in a number of national and local environmental protection programs and plans, and about forty international projects were implemented in the field of biodiversity conservation. As a result, the slowdown of land degradation, the reduction of desertification processes, and the mitigation of other negative consequences of unstable natural resource use have been achieved. The biodiversity of Uzbekistan includes about 27 thousand species known to date. Among them,

there are about 11 thousand species of higher vascular plants, mosses, lichens, fungi, and algae, and more than 15.6 thousand species of fauna representatives. The endemism of higher vascular plants in Uzbekistan is about 8%. Relic endemics constitute 10-12% of the total number of endemic species. Currently, the fauna of vertebrate animals in Uzbekistan, which includes species registered in the country during the entire period of zoological research, is represented by 5 classes and includes 715 species, including 77 species of fish, 3 species of amphibians, 61 species of reptiles, 467 species of birds, and 107 species of mammals. Endemics of Uzbekistan and Central Asia are represented by 53 species and subspecies of terrestrial vertebrates. The endemism index in reptiles is 50%, the lesser endemism degree is observed in the mammalian class - 14%, and the insignificant number of endemics is noted for the bird class - 1.7%. The level of endemism among fish reaches more than 50%.

Climate change in Central Asia is one of the global environmental problems of great importance for the peoples of the region. It is known that in recent years, climate change has been rapidly progressing worldwide, significantly impacting not only natural systems and people's lifestyles but also socio-economic conditions and healthcare systems. These changes hinder efforts to ensure food security, poverty reduction, and sustainable development. Uzbekistan is actively promoting a number of initiatives aimed at combating these problems and ensuring the region's environmental sustainability[19].

Today, the Central Asian region is increasingly experiencing the consequences of climate change associated with water scarcity, land degradation, and natural disasters. Due to the tragedy of the Aral Sea, the negative consequences of climate change are felt more acutely in our region. The increase in air temperature is twice as high as the global average. According to the UN Development Programme, the average annual temperature in Central Asia has increased by 0.5 degrees Celsius over the past three decades. It is projected that by 2085 it will increase by 2.0-5.7 degrees.

In 2024, to implement measures within the framework of the nationwide "Green Space" project, the Cabinet of Ministers adopted a resolution No. 144-F dated March 7, 2024. This project includes a number of important initiatives aimed at improving Uzbekistan's ecology and expanding green zones. Within the framework of the nationwide "Green Space" project, 138.1 million tree seedlings were planted across the Republic in the spring of 2024, which is 110.5% of the planned target. This stage of the project is aimed not only at improving the ecology but also at enhancing the aesthetic appearance of our cities. In particular, 257 "Green Parks" were created, bringing their total number to 517. In addition, "Green belts" were created around industrial enterprises by planting 5.3 million tree seedlings. These efforts are aimed at reducing the impact of industrial enterprises and protecting the environment. Ministries and agencies also contribute to the aforementioned activities.

Thus, climate change in Central Asia is having a negative impact not only on the natural environment but also on socio-economic conditions. These changes hinder ensuring food security, poverty reduction, and sustainable development efforts. The Aral Sea disaster and rising air temperature remain a serious problem for Central Asian countries. The government of Uzbekistan is putting forward a number of initiatives to combat climate change and its negative consequences. Within the framework of international cooperation, proposals for developing a Regional Strategy for Climate Change Adaptation in Central Asia and establishing a "Central Asian Climate Dialogue" are of great importance. Uzbekistan's active participation in the UN Climate Change Conference (COP28), the call for the prompt coordination of the Global

Adaptation Mechanism within the framework of the Paris Agreement, and proposals for transitioning to a low-carbon economy demonstrate the country's firm position in this direction.

I would like to note that Uzbekistan is actively participating in the fight against climate change and its consequences. The government's environmental initiatives and reforms are aimed at creating a healthy and sustainable environment for the peoples of the region. Moreover, initiatives within the framework of international cooperation contribute to the region's environmental sustainability. This article fully supports Uzbekistan's efforts to adapt to climate change and reduce its negative impacts in the future.

In conclusion, it is worth noting that the ecological function of modern states is to ensure a decent quality of the environment in the context of the active, economic formation and development of society in accordance with the legal forms of implementing international relations. Moreover, regulatory legal acts, whose role and significance are important in creating and ensuring the activities of public sector mechanisms in the implementation of the environmental function, should occupy a dominant role in this segment of relations, taking into account prospective tasks.

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