

Digitalization of Environmental Regulation: Legal Aspects

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Annotation: This article discusses some issues of digitalization in the field of environmental protection, in particular, the implementation of environmental regulation as the activity of specially authorized state bodies for the development, approval of environmental standards and ensuring their compliance by all subjects of environmental management. The current legal issues of further improvement of the sphere of digitalization, including problems in the field of environmental regulation, and ways to solve them are analyzed. The foreign experience of informatization and digitalization in the field of environmental protection has been studied. The features of the digital transformation of state functions are considered, such as accounting for objects of harmful, negative impact on the environment; rationing in the field of environmental protection and issues of improving the system of public services in the establishment of environmental regulations and standards. Also, foreign experience was studied, a comparative analysis of national and foreign legislation in the field of digitalization of activities for the establishment of environmental standards was carried out. The article proposes to understand that digitalization is a modern global direction of economic and social development, which is based on the transformation of information into digital form, leading to an increase in the efficiency of the economy and improving the quality of life of the people of the world.

KEYWORD: digitalization, environmental regulation, environmental control, environmental regulation, environmental quality standards, maximum permissible standards for emissions and discharges of pollutants and biological organisms.

Today, the world is striving to develop a digital economy in order to have a significant impact on the rate of growth of production, the quality of life of the people, the level of services provided, as well as on the functioning of the state apparatus. The level of development of modern society obliges to deepen the content of the digital economy, as it has become a productive force capable of creating new ideas, products and opportunities.

It is known that digitalization is the introduction of modern digital technologies in various spheres of life and production. Around the world, at the end of the XX century began to talk about information technology and the digital economy, while in our country at this time the first mobile phones began to appear. Since then, the Internet has now become a useful positive for us things, almost everyone can't imagine without smart or smart devices.

The number of human activities covered by digitization is increasing every year. The use of digital technologies is becoming an integral part of our reality. They are pervasive in all spheres, and the

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legal sphere is no exception [1]. The introduction of digital technologies is rightly called the fourth industrial revolution, which challenged all established social life patterns [2].

In general, digitalization globally is a concept of economic activities based on digital technologies, introduced into various spheres of life and the national economy. Data play an increasing role in innovation, education, the environment and the provision of public services. However, the opportunities that lie behind the further development of digital technologies are forcing Governments and others to adapt to the new reality. In this regard, legislation on innovation, competition, confidentiality, trade and investment, consumer protection, human capital will need to be reviewed.

It is the progressiveness in the sphere of digital technologies and information today that determines the level of socio-economic development of the State. At the same time, the existing legislation does not fully correspond to the emerging digital reality, there is a lag of the legal regulation from the emerging social conditions, which makes it necessary to adjust the regulatory framework. This fact draws the attention of Microsoft CEO Satya Nadela, pointing out that the confident application of innovative technologies is impossible without appropriate regulations the legal climate, and outdated legislation is ill-suited to address existing problems [3].

It is believed that the term «digitalization» was first introduced in 1995 by Nicholas Negroponte, an American researcher from the Massachusetts Institute of Technology, and the brother of former U.S. Deputy Secretary of State and Director of National Intelligence John Negroponte. In his book «Being Digital» Nicholas Negroponte compares atoms and bits as the smallest particles of the material and digital worlds respectively. In his opinion, what is composed of atoms, sooner or later it will be possible to add up and of bits [4].

Undoubtedly, in order to expand the sphere of application of digital technologies and ensure their continuous development, State programmes on this subject are being developed in the Republic of Uzbekistan. In particular, in order to accelerate the development of the digital industry in the country, to increase the competitiveness of the national economy, as well as to ensure the implementation of objectives, defined in the State Program for the Implementation of the Strategy of Action in the five priority areas of development of the Republic of Uzbekistan in 2017-2021 in the «Year of Development of Science, Education and Digital Economy» «Digital Uzbekistan - 2030» [5]. This document also approved the program of digital transformation of regions and industries. At the same time, as part of the digital transformation of regions and industries, it was planned to increase the level of connection of settlements to the Internet, the introduction of certain information systems, electronic services and other software products in various spheres of social and economic development of regions. As the President of the Republic of Uzbekistan Sh.Mirzিয়েv rightly notes "... without a digital economy there is no future for the country's economy" [6].

«Digital Uzbekistan-2030» strategy envisages further improvement of e-government system, development of domestic market of software products and information technologies as the main priorities. The document also provides for the improvement of the technical infrastructure of e-government, the digitalization of public services and the development of the information ecosystem. There is no doubt that State bodies and organizations will even post statistics on the use of land resources online on the Open Data Portal of the Republic of Uzbekistan.

But, in the scientific literature, the term «digitalization» is not properly defined and even there is no unified approach or understanding. In most cases, scientists simply use the term to describe the current conditions of development, without revealing its content. According to some scholars, even the absence of a formal interpretation of these concepts in legal acts creates certain risks for their implementation in law enforcement practice [7]. Foreign scholars draw attention to the fact that the

problem of digital technologies and law-making has two aspects: the creation of laws regulating the digital sphere, and the impact of digital technologies on the creation and implementation of creative work in digital development [8].

Of course, the use of digital technologies in the field of environment and agriculture leads to a significant increase in the data available for the analysis of the causes, forces, processes, behaviour of all actors in these fields and thus, New grounds for legislation are emerging. Also, digital technologies make it increasingly possible to use alternative energy sources, «smart» distribution systems, housing and water supply systems, more adequate to the environment, reducing the negative impact or its pollution, conservation of biodiversity on the Earth planet.

Digital transformation affects all aspects of modern society, and environmental protection, safety and management are no exception. One of the main properties of digital technologies is that they are «cross-cutting» and universal for different spheres of society [9]. We may find in the legal literature that the digital technologies used do not offer ready-made solutions to environmental problems, they can significantly facilitate the processing of a large amount of statistical information, make it possible to carry out its in-depth and comprehensive analysis in the shortest possible time, to qualitatively change the management activity in a certain field in general [10].

It is undeniable that, at this time, the state of the natural environment continues to deteriorate, to such an extent and scale that almost any human action now affects nature negatively. And pollution of nature, degradation of its condition, depletion of natural resources, have given rise to a special approach of scientific research of legal protection of nature. **Most of the enterprises with the greatest negative impact on nature and their components are not in compliance with environmental requirements.**

In this regard, environmental quality management is based on the determination of an environmentally acceptable impact on the environment. Certain standards for this type of exposure are established limits on the permissible concentration of pollutants that do not cause negative effects. And in this sense it can be emphasized that one of the objectives of environmental regulation is to achieve a scientifically sound compromise between the environmental, economic and social interests of the human being, Society and the State to ensure sustainable development and a favourable natural environment. Compliance with these standards is a criterion for the observance of the human right to a favourable natural environment. Naturally, the objects of environmental regulation are: environmental objects; Atmospheric air, surface and groundwater, soil, plant and animal life; Sources and factors of pollution and harmful effects on the environment, pollutants; Ecological systems; Rules and regulations for environmental management; Methods of monitoring (sampling, testing, assessment analysis) in the field of environmental protection [11].

Thus, in the Republic of Uzbekistan, legal regulation of environmental regulation is a prerequisite for the protection, as well as the proper allocation and redistribution of natural resources. In accordance with Art. 14 The Law of the Republic of Uzbekistan «On Nature Protection», the adverse impact of economic activities on the natural environment is limited by the norms and quality standards of the natural environment, which guarantee the ecological safety of the population, Reproduction and protection of natural resources. The maximum allowable standards of pressure on the natural environment are set for the formation of territorial production complexes, the development of industry, agriculture, the construction and reconstruction of cities and other settlements. The development and adoption of environmental regulations is one of the activities of the competent public authorities [12].

In this sense, the Constitution of the Republic of Uzbekistan establishes an important norm as «The right to life is an inalienable right of everyone» (art. 24). In this case, this means that the Constitution regulates the most important human rights from the environmental and social point of view, thus obliging the State authorities to ensure the right of citizens to a favorable environment. On 30 September 1991 the Republic of Uzbekistan signed the «Declaration of Human Rights and Freedoms», art. 29 which reads: «The person has the right to a favorable environment and to compensation for damage caused to his health or property by environmental violations». This essential article, which constitutionally legitimizes the rights of citizens, underpins all environmental rights of citizens, as specified in special legislative acts, and imposes obligations on the State authorities to provide the necessary conditions for their realization and protection [13].

Also, as noted by some experts, digitalization has become one of the main sources of threats and opportunities of our time. We hope (not for the first time) that the new generation of robots will save us from routine, hard and dangerous work, and we fear that robots will spare too many from any possibility of work and earnings. We are counting on new algorithms that will independently and correctly extract valuable information from the huge data stream, but we are concerned about the surveillance of such algorithms on citizens and the consequences of such surveillance. We would like new firms and business models to compete with giant transnational corporations, but we are not sure that their employment models and employee ratings will be acceptable to us [14].

As far as foreign experience in this area is concerned, in Russia the basis for carrying out the tasks of ensuring the completeness and availability of environmental information is the formation of electronic databases (Big data) related to the implementation of the environmental activities of the authorities. These State information resources include the State Register of Objects with Negative Impact on the Environment, which is enshrined in the Decree of the Government of the Russian Federation «On approval of the Rules of creation and maintenance of the state register of objects having negative impact on the environment». It may be noted that this register of objects operates electronically, which helps to reduce the significant delays in the documentation, registration, archiving of registration documents for owners of objects of negative impact and the State, through its competent State bodies, it simplifies the procedures and deadlines for the relevant actions.

As for the system of database formation in our country, first of all, let us pay attention to the process of legislative improvement of informatization of the system of state control, aimed at transition to digital transparency. Thus, by the Cabinet of Ministers Resolution 377, dated 15.06.2017. approved the Regulation on the Center of Specialized Analytical Control in the Field of Environmental Protection under the State Committee of Ecology [15] Cartographic database of pollution source monitoring and analytical control based on geographic information system technologies. In addition, the Centre provides, in accordance with the established procedure, at the request of State and economic management bodies, local State authorities monitoring the state of the environment in the State monitoring system, Information on the results of monitoring of sources of environmental pollution and analytical control; provides all interested persons with information on the environmental situation, emissions of harmful substances into the air, quality characteristics of wastewater, soil contamination, water resources; Collects, analyses and synthesizes information on the state of environmental pollution (air, water and soil) of radionuclides and other hazardous substances, etc.

Indeed, the digital economy allows to ensure the sustainability of the ecosystem and the transition to a green economy, for example, by monitoring green «big data», including online screening of a range of profile indicators [16].

In this connection, I think it is high time to fully implement in the near future electronic document circulation in the field of ecology and environmental management, i.e. full digitization of the State environmental control, increase of operational information exchange, which extends the scope of artificial intelligence. Although, on the basis of the Centre for Specialized Analytical Monitoring in the Field of Environmental Protection under the State Committee for Ecology and Environmental Protection, the United Geographic Information Database of the Environmental Monitoring System is functioning the natural environment - this electronic collection system, Analysis and storage of information on the state of the environment and sources of pollution, with graphical visualization of geographical data and related information on required objects based on GIS technologies that collect, store, process and analyse data, provided by specially authorized state bodies and economic entities conducting industrial monitoring of the natural environment.

Also, the Concept of Environmental Protection until 2030 [17] envisages the implementation of necessary measures to improve the quality of the natural environment through the creation of a unified information database of state cadastres of objects of animal and plant life, The Ministry of Environment and Natural Resources of the Republic of Uzbekistan is responsible for monitoring and ensuring the openness and transparency of information on the state of the environment and possible environmental threats.

Thus, prospects for the further development of digitalization in the sphere of nature protection, namely in setting environmental standards, are seen in the creation of the most favorable conditions, first of all, the stabilization of the economic situation in the country, the development of legislation, Establishing guarantees for the realization of the right to a favorable environment in due form, the implementation of an environmental policy aimed at supporting the active activities of all actors in the field of nature protection.

In our view, it is necessary to draw up administrative regulations on the provision of public accounting services for facilities that have a negative impact on the environment subject to environmental control. Also, develop an instruction defining the sequence of actions in the reporting in the field of ecology and establishing the procedure for the use of the personal cabinet of the natural user for obtaining permits. In addition, develop legal norms establishing the obligation of the State Committee on the Environment to record appeals from natural users, protect them from involuntary interference by third persons and respond to such communications electronically. The authenticity of the information transmitted, requests for documents and other information necessary to obtain public services must be ensured.

In this regard, the following main aspects of digitalization in the field of environment should be highlighted:

- the introduction of new technologies will allow timely response to the negative impact on the environment;
- significantly reduce the burden on the ecosystem as a whole;
- many processes will become fully automated and will not need so much paperwork, thus minimizing corrupt factors in this area;
- the introduction of digital technologies in public administration in the field of ecology allows more accurate identification of environmental problems;
- optimization of environmental control activities

- Avoiding distortion of statistical and other reporting data characterizing the activities of public authorities in this field, which will create conditions for a more objective assessment of the effectiveness of activities on the part of society, On the other hand, it will increase the openness of data to citizens.

Of course, in this article we wanted only to point out the possibility and necessity of using the digitization mechanism for the design of environmental problems, i.e. the development and adoption of environmental regulations and environmental standards in our country.

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