УДК 504.062.2

DIGITAL TRANSFORMATION OF THE ENVIRONMENTAL POLICY

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With the advent of the big date era, the dilemma of traditional ecological governance has become increasingly prominent. Therefore, how to promote the digital transformation of ecological governance, innovate ecological governance models, and improve ecological governance performance has become particularly important. This article sorts out and summarizes the path of digital transformation of the ecological environment, and introduces the application of blockchain and 5G technology in the process of digital transformation.

Keywords: big data; digital transformation; ecological governance; environment; information technology.

ЦИФРОВАЯ ТРАНСФОРМАЦИЯ ЭКОЛОГИЧЕСКОЙ ПОЛИТИКИ

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С наступлением эпохи больших данных, становится очевидной необходимость изменения подхода к экологической политике. Вопросы цифровой трансформации и экологических инновация становятся особенно актуальными. Данная статья посвящена исследованию проблем совершенствования экологического управления с использованием современных цифровых технологий, включая блокчейн и 5G-технологии.

Ключевые слова: большие данные; цифровая трансформация; экологическое управление; окружающая среда; информационные технологии.

The focus of the digital transformation of ecological governance is to speed up the construction of ecological environment monitoring network. It should enhance the sensitivity of ecological environment data sensors, intelligent transmission of environmental data to analysis capabilities, prediction and early warning of ecological environment elements. It will allows to improve analytical decision-making and disposal capabilities, as well as to make more effective combination of data, modern digital technology and ecological governance [1–3]. The following is the path of digital transformation of ecological governance.

1. Build and improve the ecological environment database

The digital transformation of ecological governance requires massive amount of data and a solid foundation. Specifically, we should first plan and upgrade the cloud platform in a unified way. The digital transformation of ecological governance relies on the public technical

components and data resource system built by the digital management center, and builds an ecological environment database on the basis of the construction of an intensive and integrated infrastructure system for ecological governance to create a large platform, a big system, and a data center for ecological governance. This establishes a data warehouse for the environmental protection department [2–4].

2. Optimize the management process of ecological governance

Up to now, the government still plays a leading role in ecological governance. Therefore, the digital transformation of ecological governance must realize the optimization and reengineering of management processes in this filed, and make full use of network information technology and modern digital technology to enable the ecological governance. Process to achieve technology innovation and model innovation. At the same time, applying internet thinking to systematically innovate and optimize the management process of ecological governance.

3. Promote the intelligent transformation of pollution prevention and control

Under the current circumstances, for the problem of ecological and environmental protection, pollution prevention and the establishment of an integrated platform for digital sound ecological management is the key to digital transformation problems.
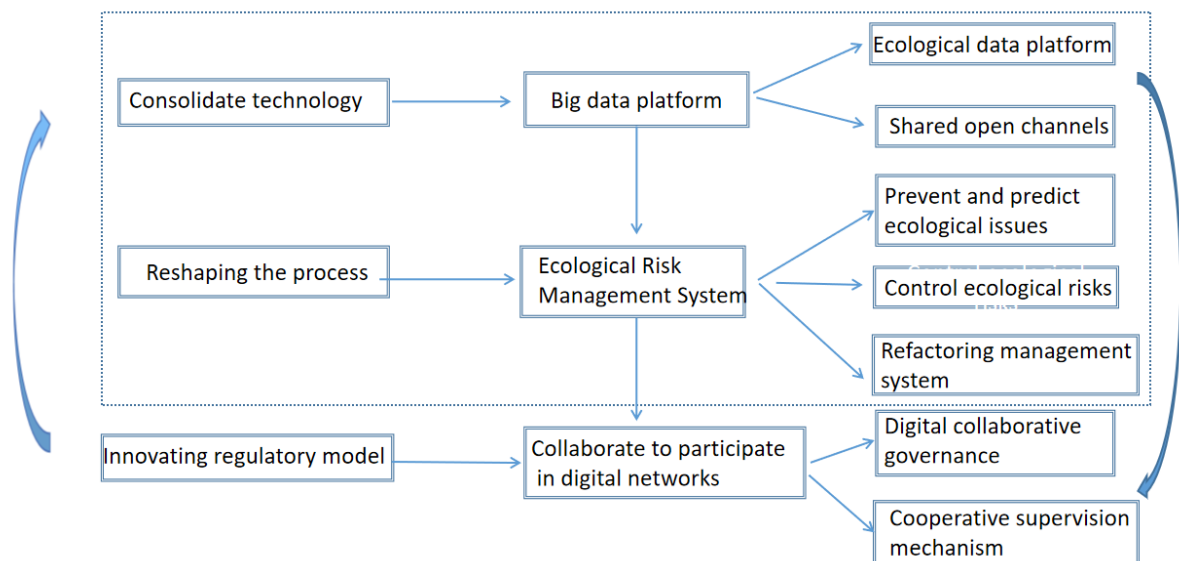

Figure 1 – **The basic idea of the digital transformation of the ecological environment**

Note – The author's self-developed figure on the basis of [2–4].

The further development of new information technologies such as 5G technology, Internet of Things, and blockchain have promoted the integration of energy conservation and environmental protection industries and information technology. They improve the pollutant monitoring and information release system, form a dynamic monitoring network of resource and environmental carrying capacity covering the main ecological elements, and realize the interconnection and openness of ecological environmental data shared.

In the ecological field, the use of blockchain technology can improve the efficiency of hazardous waste treatment. Blockchain is a new application mode of computer technology such as distributed data storage, point-to-point transmission, consensus mechanism, and encryption algorithm. In essence, it is a shared database. The data or information stored in it has the

characteristics of «unforgettable», «full trace», «traceable», «open and transparent», and «collective maintenance». Therefore, blockchain technology has very high reliability and security, as well as the advantages of decentralization, openness, transparency, and traceability [5].

The application of 5G technology in the digital transformation is the next important step. With the empowerment of 5G technology, new technologies such as big data, cloud computing, Internet of Things, and artificial intelligence are becoming indispensable means for ecological environment supervision and pollution prevention. In terms of environmental monitoring, 5G and the internet of things, blockchain, big data and other technologies are combined. Satellite remote sensing, unmanned aerial vehicles, unmanned ships, and various environmental monitoring instruments gradually realize intelligent networking, which can realize the environment and platform, platform and people real-time information exchange. It can help to connect between the transmission of pollution location, pollution causes, pollution pictures, to avoid the occurrence of incidents where the source of the pollution cannot be found, and to provide shared data between different regions to assist joint prevention and control [5].

As a whole, the digital transformation of ecological governance is an important part of the energy-saving and environmental protection industry. It focuses on all aspects of ecological governance, the entire process of information technology applications and the reshaping of governance processes. The core is the application of modern information technology, artificial intelligence, etc. to improve the level of intelligent ecological governance and governance performance. It reforms or reshapes the national ecological governance process, and at the same time can enhance the soft power of ecological governance and help the development of green economy. Although research on digital ecological governance or digital transformation of ecological governance is currently in its infancy, there is no doubt that it will be the main theme for coordinating economic development in the future and improving the quality of the ecological environment.

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УДК 339.565

НАПРАВЛЕНИЯ ИННОВАЦИОННОГО РАЗВИТИЯ ТРАНСПОРТНО-ЛОГИСТИЧЕСКОЙ СИСТЕМЫ ИРАКА

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