
*Hryhorii Bukanov*¹

INSTRUMENTS FOR IMPLEMENTING ENVIRONMENTAL POLICY AT THE REGIONAL LEVEL

Keywords: Region, environmental policy, regional environmental policy, environmental legislation, environmental management, financial and economic instruments, intersectoral social partnership, electronic environmental governance.

ABSTRACT: The article highlights and systematizes modern and effective management instruments in the implementation of regional environmental policy. It is determined that the regional environmental policy acts as a component of the national environmental policy, which is based on environmental national and international legislation, standards and norms and contributes to the sustainable development of the region as a socio-ecological-economic system. The following groups of instruments for the implementation of environmental policy at the regional level have been identified: instruments of legal regulation (environmental legislation); environmental management instruments (environmental audit, environmental certification, environmental labeling, environmental marketing, strategic environmental assessment, environmental monitoring, environmental education) financial and economic instruments (environmental taxation, environmental payments and fees, environmental regulation, penalties for violation of environmental legislation, preferential taxes, soft loans and subsidies, investment and environmental funds); instruments of intersectoral social partnership (intersectoral communication, intersectoral interaction, instruments of public influence); e-environmental management instruments (information and communication technologies). Based on the results of the expert survey, the most effective instruments for the implementation of regional environmental policy (in order of importance and influence) were identified: environmental management in-

¹ Candidate of Political Science, Associate Professor, Doctoral Student at the Department of Management and Project Management, Dnipropetrovsk Regional Institute of Public Administration of the National Academy of Public Administration under the President of Ukraine, vip.gregorov5@gmail.com, ORCID: 0000-0002-5398-5953.

struments (environmental audit and monitoring), economic instruments and intersectoral social partnership; e-environmental management instruments and such environmental management instruments as environmental marketing, certification and labeling received low scores. Statistically significant differences were revealed in the assessments of the effectiveness of instruments depending on the sphere of professional activity of experts: for the representatives of regional authorities in the field of environmental protection, the most influential instruments are strategic environmental assessment, environmental audit and public environmental control; for the representatives of public organizations in the field of ecology – environmental monitoring, environmental audit and public environmental control; for the representatives of business structures of Zaporizhzhia region – economic instruments, environmental marketing, environmental audit, environmental certification and product labeling; for the environmental scientists – public environmental control, environmental impact assessment, intersectoral social partnership, environmental monitoring, strategic environmental assessment. The tendencies and ways of improving the instruments for the implementation of the regional environmental policy are highlighted: development of the strategy of the national environmental policy, taking into account the regional specifics; strengthening the powers of regional environmental management bodies for control and monitoring in the field of environmental protection; introduction of environmental management system instruments in the region; strengthening the role of economic instruments, including creating conditions for the development of a „green” investment climate in the region; creation of an extensive regional environmental monitoring system; introduction of an electronic environmental management system in the region; incorporation of cross-sectoral social partnership in the field of regional environmental management with a well-defined legal and institutional framework.

INTRODUCTION

Today Ukraine has formed an environmental policy, environmental legislation, environmental management, designed to ensure the reproductive development of society, which, in turn, thanks to the economical use and reproduction of natural resources, allows satisfying the needs of the modern generation without endangering the life and well-being of generations, makes it possible to implement the strategic goals of sustainable development.

In modern conditions, the actualization of the problems of sustainable development management requires the development of an effective system of regulatory instruments in the formation and implementation of environmental policy, where the leading role is played by the state and government authorities. Of particular importance is the modernization and

optimization of the regional environmental management system, the improvement of instruments for the formation and implementation of environmental policy at the regional level, carried out as a process of state regulation in the field of environmental management within a certain territory. That is why such a scientific and social problem as the systematization of instruments for implementing environmental policy at the regional level is being actualized in order to identify trends for their improvement.

Thus, the purpose of the study is to identify and systematize modern and effective management instruments in the implementation of regional environmental policy. Achievement of this goal presupposes the solution of the following tasks: 1) identification and analysis of the main groups of instruments for the implementation of regional environmental policy; 2) identification of the most effective instruments for the implementation of regional environmental policy (based on the results of empirical research); 3) highlighting trends and ways to improve the instruments for the implementation of regional environmental policy.

The methodological basis of the study is made up of general scientific methods of cognition of social phenomena and processes (analysis, synthesis, generalization, classification) and sociological methods for obtaining empirical data (expert opinion poll). In the course of the study, the following methods were used: analysis and synthesis – to highlight the content and functions of regional environmental policy; classification – to systematize the instruments for the implementation of regional environmental policy; generalization and forecasting – to identify trends and ways to improve the instruments for implementing environmental policy in the region; expert sociological survey – to identify the most effective instruments for the implementation of regional environmental policy. The empirical basis of the study is the results of an expert survey of environmental management subjects – representatives of regional government bodies, public organizations, business structures, scientific ecological community of Zaporizhzhia region (January 2020, n = 100).

FUNCTIONAL FEATURES OF REGIONAL ENVIRONMENTAL POLICY

Analysis of literary sources suggests that there is no unified approach to the interpretation of state environmental policy. Thus, Serhiienko L., Dziubenko O. and Ozhho S. argue that “the state environmental policy is a set of legally defined goals and objectives, means and instruments, measures and actions of public authorities at all levels in the field of ecology and environmental protection, aimed at preserving and reproducing, as well as protecting the natural environment, making the most efficient use of the country’s natural resource potential, ensuring rational, environmentally safe management and highly efficient balanced use of natural resources through the introduction of innovative and environmental technologies, creating favorable conditions for ensuring the environmental safety of the state and safety life of its citizens” (Serhiienko, Dziubenko, Ozhho, 2019, p. 192–193).

For his part, Marych Kh. points out that “the environmental policy strategy should determine not only the priority goals and directions, but also the appropriate measures and means for their implementation, taking into account the real state of the environment and trends towards changes in it, the needs of social and economic development of the country based on fundamental doctrinal provisions” (Marych, 2019, p. 190). The above definitions give reason to talk about environmental policy as a system of instruments of state and public administration in the field of ecology and environmental protection, contribute to the achievement of the goals of sustainable development of the state as a whole and its individual regions as socio-ecological and economic systems.

In the context of decentralization of public administration, the role of local self-government in the management of the environmental sphere is increasing, and, consequently, in the formation of regional environmental policy. As Andriienko M. and Shako V. note, “the state’s regional environmental policy is an organic component of the national environmental policy. State environmental policy at the regional level is implemented with the help of mechanisms aimed at stimulating the development of regions, based mainly on regulatory environmental

national and international legislation, standards and norms” (Andriienko, Shako, 2017, p. 51).

It should be noted that the implementation of environmental policy at the regional level depends on the specifics of the region (territory), the availability of natural resources, business entities (industrial enterprises), the effectiveness of the regional government bodies, the development of civil society (the level of activity of public eco-organizations at the local and national level), the degree of environmental awareness and the environmental education system, which is the expression of such an instrument as environmental communication. The main goal and objectives of the state environmental policy at the regional level in the long term is to improve the quality of life of the population of the region by improving the environmental parameters of the life support system, introducing new science-intensive, resource-saving environmentally friendly technologies, creating a stable environmentally friendly economic and production complex, creating environmentally safe living conditions for people, development and implementation of medium-term regional action plans for environmental protection as the main instrument for the implementation of national environmental policy at the regional level.

SYSTEMATIZATION OF INSTRUMENTS FOR IMPLEMENTING REGIONAL ENVIRONMENTAL POLICY

In the adopted Law of Ukraine „On the basic principles (strategy) of the state environmental policy of Ukraine for the period up to 2030”, the goal of environmental policy is to achieve a satisfactory state of the environment by introducing an ecosystem approach in all areas of socio-economic development of Ukraine in order to ensure the constitutional right of every citizen of Ukraine on a safe environment, the introduction of balanced environmental management, conservation and reproduction of natural ecosystems (Zakon Ukrainy, 2019).

Based on this document, the main instruments for the implementation of environmental policy are identified, among which the main ones are: legal regulation based on European standards, intersectoral social partner-

ship, strategic environmental assessment, environmental administration based on environmental management, financial and economic instruments, electronic environmental management. This allows us to systematize the following groups of instruments for the implementation of regional environmental policy: instruments of legal regulation in the field of environmental protection; environmental management instruments ; financial and economic instruments; instruments of intersectoral social partnership in solving environmental problems of the region; electronic environmental management in the regional society.

The first group of instruments for the implementation of environmental policy at the regional level is associated with the development, implementation and improvement of environmental legislation. The main requirements for such legislation are its compliance with the Constitution of Ukraine, approximation to the relevant directives of the European Union (EU), the legal basis for which is Section V, Chapter 6 of the Association Agreement between Ukraine and the EU (Uroda pro Asotsiatsiiu, 2017), ensuring deployment and implementation of international environmental agreements to which Ukraine is a party. Such legislation should contribute to the effective application of appropriate economic, organizational and managerial instruments to stimulate the introduction of environmental technologies, to solve environmental problems at the regional level.

The second group of instruments represents the environmental management system. The most complete interpretation of environmental management is given in the international standard ISO 14000. “The environmental management system is a part of the general management system, which includes the organizational structure, planning of activities, distribution of responsibilities, practical work, as well as procedures, processes and resources for development, implementation, assessment achieved results of implementation and improvement of environmental policy, goals and objectives” (Environmental management systems, 2004).

So, environmental management acts as an instrumental component of the overall environmental management system at the territorial hierarchical level within the framework of global environmental policy, the state as a whole, the region, a separate territory (city, village, a separate natural zone), corporations, enterprises in areas with market trends. The basis of

environmental management as an environmental-centered management system is environmental standards – international (ISO 14000) and national, state level (DSTU).

The environmental management of the region is a management system that is aimed at the implementation of comprehensive regional environmental programs. Moreover, at this level, environmental management is associated with the constant (balanced) development of the region as a socio-ecological-economic system. It should be noted that the socio-ecological-economic system understands holistic (integration) education, combining economic, social, institutional and ecological subsystems that interact through exchange processes between human activity and the environment (Dombrovs'ka, Kovrehin, Pomaza-Ponomarenko, Koliienov, 2017, p. 10–11). So, within the framework of the socio-ecological-economic system corresponding to a certain administrative-territorial entity (region, region), an environmental management system can be implemented, which is reflected both in the state environmental policy and in the regional environmental policy, which means it is public administration. through the instruments and mechanisms of environmental management, it is intended to ensure the appropriate institutional conditions for the development of the social, ecological and economic system.

The functioning of the environmental management system is carried out using certain methods, mechanisms and instruments. For example, Zholobchuk I. identified the following groups of instruments: administrative and control, technical and technological, economic, legislative, political, educational and upbringing (Zholobchuk, 2017, p. 235). The typology of instruments of the environmental management system is presented, which, in our opinion, is more consistent with the general system of instruments for the implementation of environmental policy. Moreover, these instruments are defined as priority and strategic in the Law of Ukraine „On the basic principles (strategy) of the state environmental policy of Ukraine for the period up to 2030”. Therefore, the system of management instruments in environmental management can be narrowed down to several main groups.

The first group is directly related to the very basis of environmental management – the system of international and state environmental stand-

ards ISO and GOST. This group includes environmental auditing, environmental certification and environmental labeling. The second group of environmental management instruments represents a systematic assessment of the environmental state of the environment and the impact of a technogenic factor – strategic environmental assessment, environmental monitoring, environmental impact assessment. The third group is highlighted by us separately and is associated with the environmental development of the region, territories, enterprises – environmental marketing, environmental education and upbringing. The fourth group of environmental management instruments provides for a separate consideration and is associated with economic instruments for the implementation of state environmental policy. It should be noted that all of these instruments are regulated by national environmental legislation and implemented by international agreements, conventions, and the like.

Financial and economic instruments act as a separate group of instruments for state regulation in the environmental sphere with the help of environmental and economic levers. In the Handbook „Towards a green modernization of the economy: a sustainable consumption and production model” economic instruments are defined as follows: “Economic instruments are an important group of instruments for the implementation of environmental policy. Their use provides a change in the behavior of business entities by transferring external costs from destruction or depletion of environmental objects to the category of internal costs and changing the set and structure of incentives for these entities. The key role of economic instruments is that it is because of them that there is an impact on the motivation of the activities of business entities, their economic interests” (Berzina (Eds), 2017, p. 19).

The following provisions characterizing financial and economic instruments in the context of the implementation of state environmental policy at the regional level can be distinguished: firstly, the idea of external environmental costs acts as a theoretical basis for the use of economic instruments; they find their expression in negative forms of the impact of production and environmental consumption; secondly, ecological and economic instruments are aimed, on the one hand, at the economic safety of rational use of natural resources, and on the other, at the protection of

the environment; thirdly, the principles “polluter pays” and “user pays” are the basis for the practical application of economic instruments; fourthly, economic instruments contribute to the development of a „green” economy and act as a driving force for sustainable (balanced) development.

Analyzing various classifications of economic instruments, two main groups of such ecological and economic instruments of state regulation in the field of environmental protection can be distinguished. The first group is associated with such functional loads as fiscal and budgetary, which include environmental taxation, environmental charges and fees, environmental regulation and penalties for violation of environmental legislation. The second group of economic instruments for the implementation of state environmental policy is associated with the system of financial and economic incentives for environmental protection – preferential taxes, preferential loans, subsidies, regulation of prices for primary resources and final products, the formation of a market for environmental goods, services and works (development of a „green” economy) and etc.

As we noted, strengthening the role of regional governance in the implementation of environmental policy is one of the main foundations and strategic directions of the concept of environmental policy until 2030, then it is the social partnership of regional management entities in the environmental sphere that is a priority instrument in achieving sustainable (balanced) development goals regions.

Intersectoral social partnership as an instrument for the implementation of regional environmental policy can be defined as the interaction of state governing bodies in the field of ecology, local governments, business corporations, civil society institutions, representatives of the scientific community, members of territorial communities in order to ensure the environmental safety of the region and meet the environmental needs of the population based on the principles of social justice, subsidiarity and solidarity.

Social partnership in environmental management is a functional system, and the structure of social partnership management is multi-layered. Thus, Nelipa D. defines the following structure of the social partnership system, to which the communicative, regulatory, functional and institu-

tional subsystems belong (Nelipa, 2005, p. 7). Communicative subsystem – covers social relations, that is, those relationships of the subjects of social partnership that are formed in the process of implementing social partnership. Regulatory or normative-regulatory subsystem forms a set of social norms, acts as a regulator of social interaction between the subjects of social partnership. The functional subsystem of social partnership is aimed at building a mechanism for social interaction between the subjects of social partnership. The institutional (organizational-institutional) subsystem consists of institutions of social partnership and is a source of social ties and social interaction that arise between them.

The concept of environmental management in the implementation of environmental policy (especially at the regional level) corresponds to modern trends in public administration, contributing to accessibility and transparency in the interaction of the state, business and the public in solving environmental problems. Thus, according to the Concept for the Development of Electronic Governance in Ukraine, the following definition is provided: “E-government is a form of organization of public administration that contributes to increasing the efficiency, openness and transparency of the activities of public authorities and local governments using information and telecommunication technologies to form a new type of state, oriented to meet the needs of citizens” (Rozporiadzhennia Kabinetu Ministriv, 2017).

Thus, electronic environmental management can be presented as a form of public administration in the implementation of environmental policy for the use of information and communication technologies in the aspect of interaction between the state, business and citizens in solving environmental problems. In the system of electronic environmental management, two main aspects can be distinguished that relate to the implementation of state and regional environmental policy: 1) informational (informing about the legislative, regulatory framework for the implementation of environmental policy; reporting on environmental monitoring in a certain region, informing about the implementation of economic projects on the territory of the region) and 2) interactive (electronic inquiries and requests of interested parties; electronic polls on environmental problems of the region; electronic petitions and electronic referendums to improve the efficiency of

regional environmental safety management; creation of Internet forums, groups in social networks, holding Internet conferences to disseminate environmental issues among representatives of all strata and groups of the population of the region).

The information aspect is associated with the creation of information web resources for the implementation of environmental policy in the territory of a certain regional entity and contributes to the implementation of such a principle of national environmental policy as the equality of the three components of state development (economic, environmental, social), which leads to focus on the priorities of sustainable development, accounting environmental consequences in making economic decisions; environmental responsibility, requiring the introduction of liability for violations of legislation on the protection of the natural environment. The interactive (reverse) aspect of the electronic environmental management system is associated with the interaction (based on the use of information and communication technologies) between state and regional environmental authorities, public environmental organizations, environmental services of large enterprises in the region and citizens.

Thus, the results of the analysis of the instruments for the implementation of regional environmental policy make it possible to systematize their main groups and functional features (Table 1).

Table 1. Systematization of instruments for implementing regional environmental policy

Groups of instruments	Instruments	Functional features
Regulatory instruments	Environmental legislation	<p>Development of a strategy for national environmental policy, taking into account regional specifics</p> <p>Involvement of regional authorities in the process of implementation and approximation of the environmental component of the Association Agreement</p>

Groups of instruments	Instruments	Functional features
Environmental management instruments	Environmental audit Ecological certification Ecological labeling Environmental marketing Strategic environmental assessment Environmental monitoring Environmental education	Identification of potentially environmentally hazardous enterprises in the region Monitoring compliance with environmental legislation of economic entities of the region Compliance of production, services, goods, in general, the object of certification with international and national environmental standards ISO and GOST Predicting the level of environmental impact Formation and development of the market for environmental goods
Financial and economic instruments	Environmental taxation Environmental fees and charges Environmental regulation Penalties for violation of environmental legislation preferential taxes Concessional loans, subsidies Investment and environmental funds	System of payments for nature use, environmental pollution and waste disposal Setting limits on emissions and discharges of pollutants Concessional lending for modernization of production using cleaner production technology Subsidies and transfers to regions based on the establishment of environmental protection and investment funds
Multi-sector social partnership instruments	Cross-sectoral communication Cross-sectoral interaction Public influence instruments	Development of a strategy for the socio-economic development of the region, taking into account the environmental component Interaction of local governments with private business and civil society in solving environmental problems of the region Environmental assessment and monitoring of the environmental situation in the region
Electronic environmental management instruments	Information instruments Interactive instruments	Application of information and communication technologies in the aspect of interaction between the state, business and citizens in solving environmental problems

EVALUATION OF THE EFFECTIVENESS OF INSTRUMENTS FOR THE IMPLEMENTATION OF REGIONAL ENVIRONMENTAL POLICY

To assess the effectiveness of the instruments for implementing regional environmental policy, an expert survey was conducted in Zaporizhzhia region, Ukraine (n = 100, January 2020). The experts were asked to assess on a 5-point scale (where 1 point is the lowest and 5 points is the highest assessment of efficiency) the degree of effectiveness of the instruments for implementing environmental policy at the regional level (Fig. 1). Sample – 100 experts, among them: 25 – civil servants (representatives of government bodies in the field of environmental protection), 25 – public activists in the field of environmental protection, 25 – representatives of large business in the region, 25 – scientists-ecologists.

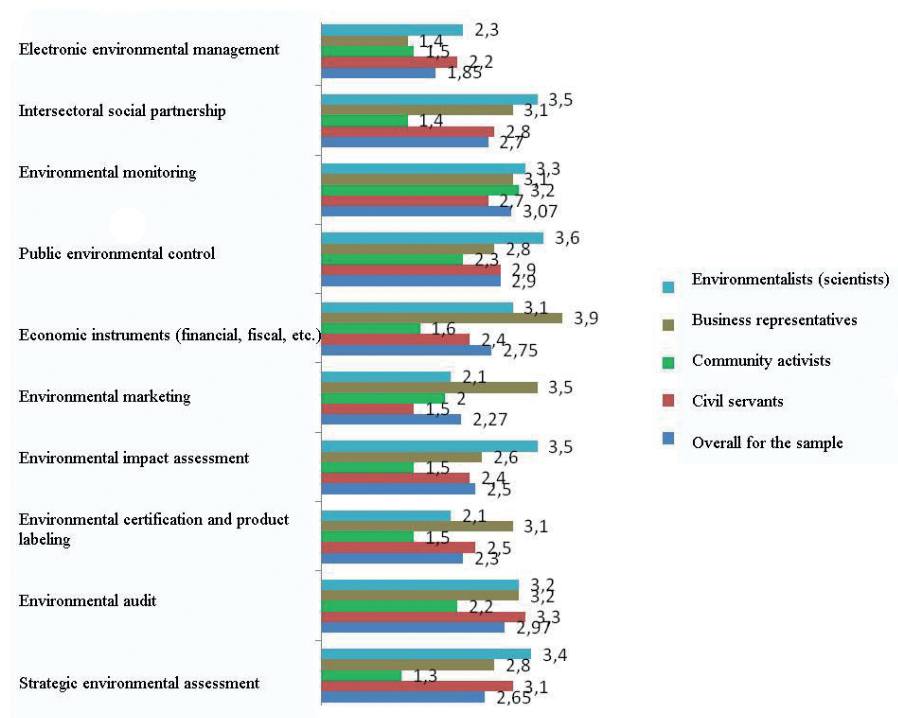


Figure 1. Evaluation of the effectiveness of instruments for the implementation of regional environmental policy (results of an expert survey).

According to the results of the study, the most effective, according to experts, instruments for implementing environmental policy in the region: environmental monitoring (3.07 points), environmental audit (2.97 points), public environmental control (2.9 points), economic instruments (2.75 points), intersectoral social partnership (2.7 points) low level of efficiency – e-environmental management (1.85 points), environmental certification and product labeling (2.3 points) and environmental impact assessment (2.5 points).

The differences in assessments of the effectiveness of the instruments of regional environmental policy are revealed depending on the sphere of professional activity of experts. So, for representatives of regional authorities in the field of environmental protection, the most influential instruments are strategic environmental assessment, environmental audit and public environmental control; for representatives of public organizations in the field of ecology – environmental monitoring, environmental audit and public environmental control; for representatives of business structures of Zaporizhzhia region – economic instruments, environmental marketing, environmental audit, environmental certification and product labeling; for environmental scientists – public environmental control, environmental impact assessment, intersectoral social partnership, environmental monitoring, strategic environmental assessment, more than other groups of experts, they appreciated the importance of electronic environmental governance.

CONCLUSIONS

1. It was determined that the essence of the regional environmental policy is as follows: firstly, it is a component of the national environmental policy; secondly, relies on regulatory environmental national and international laws, standards and norms; thirdly, aimed at improving the quality of life of the population of the region by improving the ecological living conditions; fourthly, it contributes to the sustainable development of the region as a socio-ecological-economic system.

2. The level of effectiveness of instruments for the implementation of regional environmental policy (based on the results of an expert survey) was revealed in order of importance and influence: environmental management instruments (environmental audit and monitoring), economic instruments and intersectoral social partnership. The lowest scores were received by e-environmental management instruments such as environmental marketing, certification and labeling.

3. The tendencies and ways of improving the instruments for the implementation of the regional environmental policy are highlighted: development of the strategy of the national environmental policy, taking into account the regional specifics; strengthening the powers of regional environmental management bodies for control and monitoring in the field of environmental protection; introduction of environmental management system instruments in the region; strengthening the role of economic instruments, including creating conditions for the development of a “green” investment climate in the region; creation of an extensive regional environmental monitoring system; introduction of an electronic environmental management system in the region; incorporation of cross-sectoral social partnership in the field of regional environmental governance with a clearly defined legal and institutional framework.

A promising area of further research is the development of institutional forms of social partnership in the system of environmental management at the regional level and the identification of factors for the development of the regional system of electronic environmental management.

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