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## ENVIRONMENTAL MANAGEMENT TOOLS IN THE CONTEXT OF IMPLEMENTATION OF STATE ENVIRONMENTAL POLICY AT THE REGIONAL LEVEL

**Abstract.** The article considers the tools of environmental management in the context of the implementation of the state environmental policy and sustainable development of the regions. State environmental policy is the activity of the public authorities aimed at the formation and development of the environmental production/consumption and environmental culture of the human life. The following mechanisms are used to implement the regional environmental policy: legislative and legal, managerial, economic, public and educational.

It is determined that environmental management is a component of the general system of environmental management, the system of market management of the environment, operates at the territorial hierarchical level within the global environmental policy, the state as a whole, region, separate territory (city, settlement, separate natural zone), corporations, enterprises in areas with market relations. Environmental management at the state level is a state management system aimed at creating legal norms and principles for the environmental protection, ensuring the formation of public awareness of the rational use of natural resources, support for environmental innovation and technology projects. The following groups of environmental management tools are regulated by the national environmental legislation and implemented international agreements and conventions: the first group is related to the system of international and state environmental standards ISO and SSU (*State Standards of Ukraine*) (environmental audit, environmental certification, environmental labeling), the second group represents systematic assessment of the ecological state of the environment and the impact of man-made factors (strategic environmental assessment, environmental monitoring, environmental impact assessment), the third group is related to the environmental development of the region, territories, enterprises (environmental marketing).

**Keywords:** environmental policy, environmental management, environmental audit, environmental certification, environmental labeling, strategic environmental assessment, environmental monitoring, environmental impact assessment, environmental marketing.

## ІНСТРУМЕНТИ ЕКОЛОГІЧНОГО МЕНЕДЖМЕНТУ В КОНТЕКСТІ РЕАЛІЗАЦІЇ ДЕРЖАВНОЇ ЕКОЛОГІЧНОЇ ПОЛІТИКИ НА РЕГІОНАЛЬНОМУ РІВНІ

**Анотація.** Розглянуто інструменти екологічного менеджменту в контексті реалізації державної екологічної політики і сталого розвитку регіонів. Державна екологічна політика — це діяльність органів державної влади, спрямована на формування та розвиток екологічного виробництва/споживання та екологічної культури життєдіяльності людини. Для реалізації регіональної екологічної політики використовуються такі механізми: законодавчо-правовий, управлінський, економічний, громадсько-просвітницький.

Визначено, що екологічний менеджмент є складовою загальної системи екологічного управління, системою ринкового управління довкіллям, функціонує на територіальному ієрархічному рівні в рамках глобальної екологічної політики, держави в цілому, регіону, окремої території (місто, селище, окрема природна зона), корпорації, підприємств у сферах з ринковими відносинами. Екологічний менеджмент на рівні держави являє собою державну систему управління, яка спрямована на створення правових норм та засад з охорони навколишнього середовища, забезпечення формування у населення свідомості щодо раціонального використання природних ресурсів, підтримку екологічних інноваційних та технологічних проєктів. Виділено

наступні групи інструментів екологічного менеджменту, які регулюються національним екологічним законодавством та імплементованими міжнародними угодами і конвенціями: перша група пов'язана із системою міжнародних і державних екологічних стандартів ISO та ДСТУ (екологічний аудит, екологічна сертифікація, екологічне маркування), друга група представляє системну оцінку екологічного стану навколишнього середовища і впливу техногенного фактора (стратегічна екологічна оцінка, екологічний моніторинг, оцінка впливу на довкілля), третя група пов'язана із екологічним розвитком регіону, території, підприємств (екологічний маркетинг).

**Ключові слова:** екологічна політика, екологічний менеджмент, екологічний аудит, екологічна сертифікація, екологічне маркування, стратегічна екологічна оцінка, екологічний моніторинг, оцінка впливу на довкілля, екологічний маркетинг.

## **ИНСТРУМЕНТЫ ЭКОЛОГИЧЕСКОГО МЕНЕДЖМЕНТА В КОНТЕКСТЕ РЕАЛИЗАЦИИ ГОСУДАРСТВЕННОЙ ЭКОЛОГИЧЕСКОЙ ПОЛИТИКИ НА РЕГИОНАЛЬНОМ УРОВНЕ**

**Аннотация.** Рассмотрены инструменты экологического менеджмента в контексте реализации государственной экологической политики и устойчивого развития регионов. Государственная экологическая политика — это деятельность органов государственной власти, направленная на формирование и развитие экологического производства/потребления и экологической культуры жизнедеятельности человека. Для реализации региональной экологической политики используются следующие механизмы: законодательно-правовой, управленческий, экономический, общественно-просветительский.

Определено, что экологический менеджмент является составной частью общей системы экологического управления, системой рыночного управления окружающей средой, функционирует на территориальном иерархическом уровне в рамках глобальной экологической политики, государства в целом, региона, отдельной территории (город, поселок, отдельная природная зона), корпорации, предприятий в сферах с рыночными отношениями.

Экологический менеджмент на уровне государства представляет собой государственную систему управления, которая направлена на создание правовых норм и принципов по охране окружающей среды, обеспечения формирования у населения сознания по рациональному использованию природных ресурсов, поддержку экологических инновационных и технологических проектов. Выделены следующие группы инструментов экологического менеджмента, которые регулируются национальным экологическим законодательством и реализованы международными соглашениями и конвенциями: первая связана с системой международных и государственных экологических стандартов ISO и ДСТУ (экологический аудит, экологическая сертификация, экологическая маркировка), вторая группа представляет системную оценку экологического состояния окружающей среды и влияния техноген-

ного фактора (стратегическая экологическая оценка, экологический мониторинг, оценка воздействия на окружающую среду), третья группа связана с экологическим развитием региона, территорий, предприятий (экологический маркетинг).

**Ключевые слова:** экологическая политика, экологический менеджмент, экологический аудит, экологическая сертификация, экологическое маркирование, стратегическая экологическая оценка, экологический мониторинг, оценка влияния на окружающую среду, экологический маркетинг.

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**Formulation of the problem.** The functioning of the environmental management system involves the use of certain management tools aimed at achieving practical results of the environmental policy, related to: firstly, analysis and assessment of the environmental situation in the state, region, individual territory and enterprise, identification of the environmental hazards; secondly, reducing the negative impact of identified environmental risks; thirdly, prevention of environmental hazards through the use of preventive management methods in the field of environmental policy; fourthly, control and monitoring of compliance with the environmental legislation; fifthly, the formation of conditions for the implementation of the principles and mechanisms of the “green” economy as the basis of the economic component of sustainable (balanced) development; and, sixth, the creation of a multi-entity management system for the practical implementation of the environmental policy in the region.

**Analysis of recent research and publications.** The theoretical and methodological basis of the study of the environmental management system are the works of Ukrainian and foreign scientists. The works of V. Anishchenko,

O. Balatsky, O. Bilyk, T. Halushkina, T. Halkevych, K. Demyanenko, Yu. Dobush, I. Dudnikova, M. Ilyina, O. Lukyanykhina, N. Pakhomova, O. Potay, K. Richter, T. Tryfonov, A. Sadekov, N. Selivanov, Y. Sahaidak, V. Shevchuk Works and other scientists were important and devoted to the study of environmental management as a type of management. However, a number of issues still remain unexplored, in particular the systematization of the environmental management tools in the context of sustainable regional development.

**Purpose of the article.** The purpose of the article is to identify and systematize the tools of the environmental management in the context of the implementation of the state environmental policy at the regional level.

**Presentation of the main research material.** The implementation of the state environmental policy at the regional level involves the introduction of an effective system of mechanisms and tools for management, the allocation of objects and subjects of management, its principles and functions. An integrating factor in the formation of such a management system is the management methodology, and in the field of environmental protection, environ-

mental safety, sustainable (balanced) development of a certain area – environmental management, that acts as an instrumental component of the general system of the environmental management at the territorial level within the framework of the global environmental policy, the state as a whole, region, separate territory (city, settlement, separate natural zone), corporations, enterprises in the spheres with market relations. In the context of the implementation of the state environmental policy, and regional environmental policy in particular, environmental management is a system-oriented approach to environmental policy management at the national, regional, place and local levels.

Despite the ambiguity of the concept of “management”, today it means management at different levels. Accordingly, the term “environmental management” is considered mainly in the following meanings [1, p. 227]: a) as the activity of the public environmental organizations; b) as a set of principles, methods and means of managing the environmental activities of the enterprise; c) as an management system of a separate natural complex, subject to special protection; d) as part of the overall management system, which contains the organizational structure, planning activities, duties, responsibilities, experience, methods, techniques, processes and resources for the formation, implementation, analysis and updating of the environmental policy of a particular organization.

The most complete interpretation of the environmental management is given in the international standard ISO 14000. “Environmental management

system is a part of the general management system, that includes organizational structure, activity planning, division of responsibilities, practical work, as well as procedures, processes and resources for the development, implementation, evaluation of implementation results and improvement of the environmental policy, goals and objectives” [2, p. 2].

The main features of the environmental management are [3, p. 9]: 1) it is part of the overall system of environmental management, 2) it is a system of the market management of the environment, 3) its action is limited to the territorial hierarchical level within the region, corporations, enterprises in the areas with market relations, especially production.

Thus, in a broad sense, it is a type of management, fundamentally focused on the formation and development of the environmental production and a new environmental quality of the human life, in order to preserve the environment, ensure public health and economical use of the resources in the context of sustainable development.

The functioning of the environmental management system is carried out using certain methods, mechanisms and tools. In general, there are many types of environmental management tools. For example, I. Zholobchuk identified the following groups of tools: administrative and control, technical and technological, economic, legal, political, educational and upbringing [4, p. 235].

The presented typology of tools of the environmental management system is more in line with the general system of tools for implementing the environ-

mental policy. These instruments are defined as priority and strategic in the Law of Ukraine “On the Basic Principles (Strategies) of the State Environmental Policy of Ukraine For the Period Up To 2030” [5]. Therefore, the system of management tools in the environmental management can be narrowed down to several main groups.

The first group is directly related to the very basis of the environmental management – the system of the international and national environmental standards ISO and SSU (*State Standards of Ukraine*). This group includes environmental audit, environmental certification and environmental labeling. The second group of environmental management tools is a systematic assessment of the ecological state of the environment and the impact of man-made factors – strategic environmental assessment, environmental monitoring, environmental expertise is replaced by environmental impact assessment. The third group is singled out by us and is related to the environmental development of the region, territories, enterprises – environmental marketing, environmental education and upbringing. The fourth group of environmental management tools provides a separate consideration and is related to the economic mechanisms of the state environmental policy.

The first group of environmental management tools includes environmental audit, environmental certification, environmental labeling.

In Ukraine, the normative basis of environmental audit is the Law of Ukraine “On Environmental Audit”, adopted by the Verkhovna Rada on 24.06.2004 (effective since 2005).

The law defines environmental audit as follows: “Environmental audit is a documented systematic independent process of assessment of the object of environmental audit, which includes the collection and objective assessment of evidence to establish compliance with certain activities, measures, conditions, environmental management system and information on these issues to the requirements of the legislation of Ukraine on environmental protection and other criteria of environmental audit” [6].

The main tasks of environmental audit: 1) collection of reliable data on environmental aspects of the activity of the object of environmental audit and formation on the basis of this conclusions of the environmental audit; 2) establishing the compliance of the objects of the environmental audit with the requirements of the legislation on environmental protection and other criteria of environmental audit; 3) assessment of the impact of the activity of the object of environmental audit on the state of the environment; 4) assessment of the effectiveness of plans and the validity of environmental protection measures at the object of environmental audit [7, p. 50–51].

Environmental audit can be widely used in ISO 14000 certification both to assess the compliance of the environmental management system with the requirements of the standard, and to develop programs for the preparation of environmental certification of the enterprise. Environmental certification can be mandatory or voluntary. Mandatory certification in the national system of UkrSEPRO (*State Certification System*) is subject to facilities that,

in accordance with current legislation, must meet the requirements of environmental protection, ensure environmental safety and conservation of the biological diversity. Other objects can be subjected to voluntary certification, taking into account the established international practice in accordance with Articles 17, 18 and 19 of the Law of Ukraine “On Standardization and Certification” [8, p. 267].

In Ukraine, the system of environmental certification and labeling began to develop in accordance with the requirements of the SSU ISO 14024 in 2003 as an independent and voluntary system. Its development aimed to promote the formation of a market for products with improved environmental performance according to established evaluation criteria. Thus, ensuring the functioning of the system involves: 1) development, harmonization, adoption and periodic revision of the environmental criteria for life cycle assessment (standards), which allow to assess the improved environmental and functional characteristics of the standardization objects; 2) assessment of compliance of the object of certification with the requirements of the environmental criteria (certification); 3) supervision of the certified goods, services or real estate (compliance with environmental criteria); 4) ensuring international recognition of the assessment results [9, p. 90].

Thus, environmental certification as a tool of environmental management involves compliance with production, services, goods, in general, the object of certification to the international and national environmental standards ISO and SSU, and in the certification

process local governments, regional authorities can play a significant role in the field of environmental protection, creating favourable conditions for the participation of the regional economic actors.

Environmental certification is associated with such a tool as environmental labeling. Environmental labeling is usually understood as a specific environmental declaration that indicates the impact of a product or service on the environment at all stages of the life cycle of the product or service. The term “environmental labeling” is used in the international standards, including those adapted in Ukraine. These are international standards: SSU ISO 14020 “Environmental labels and declarations. Basic principles”; SSU ISO 14021 “Environmental labels and declarations. Self-declared environmental applications (type II environmental labeling)”; SSU ISO 14024 “Environmental labels and declarations. Environmental labeling type I. Principles and methods”.

Strategic Environmental Assessment (SEA) as a tool for implementing the state environmental policy is presented in the Law of Ukraine “On Basic Principles (Strategies) of the State Environmental Policy of Ukraine For the Period Up To 2030” [5] as a systematic process for analyzing the environmental impact of the proposed plans, programs and other strategic actions, to incorporate research findings into the decision-making process, assess likely environmental impacts (including health impacts), covering environmental reporting and preparation, public relations and consultation.

Of particular importance in modern conditions is the tool of environmental monitoring, the creation of an effective system which is due to the adoption of the Law of Ukraine “On Environmental Protection”. According to Article 22 of this law, a system of state environmental monitoring is created in Ukraine to ensure the collection, processing, storage and analysis of the information on the state of the environment, forecasting its changes and developing scientifically sound recommendations for effective management decisions in Ukraine creates a system of state monitoring of the environment [10].

Environmental monitoring acts as a comprehensive environmental and legal institution, consisting of a set of state information on the quality of the environment and observations of the sectoral government agencies on changes in nature, which are summarized at the national level to obtain a single comprehensive assessment of the ecological state of the environment [11, p. 134]. M. Slyvka believes that “environmental monitoring should be considered primarily as a management function in the field of nature management and environmental protection” [12, p. 83].

As one of the tools of the environmental management system in the context of the implementation of the state environmental policy, environmental monitoring is closely related to another – environmental expertise, but according to the new Law of Ukraine “On Environmental Impact Assessment” of 23.05.2017 [13], which entered in force on 18.12.2017 to replace the old Law of Ukraine “On Environmental Exper-

”, the term “environmental expertise” was replaced by the term “environmental impact assessment”.

A separate group of environmental management tools are marketing methods, which are expressed in the concept of “environmental marketing”. Modern environmental marketing was formed as a result of the evolution of marketing concepts and dates back to the mid-1980s.

O. Sadchenko and S. Kharichkov consider environmental marketing through “the prism of a certain system of its concepts, each of which focuses on one of the key factors of the environmental marketing”. The authors identify five concepts of the environmental marketing [14, p. 56]: 1) marketing of goods and services, taking into account the environmental standards and restrictions; 2) marketing of environmental goods and services – a specific type of marketing caused by the emergence of environmental needs of the population in connection with the deterioration of the quality of the environment and increasing environmental awareness of the society; 3) marketing of natural conditions and resources (marketing of the nature management); 4) non-commercial type of environmental marketing, the purpose of which is to preserve the human habitat and the gene pool of the biosphere.

**Conclusions.** The theoretical analysis and systematization of the main tools of environmental management in the context of the implementation of environmental policy at the regional level allows us to draw some conclusions. Firstly, considering the region as a socio-ecological-economic system,



environmental management tools are aimed at optimization in the economic sphere, which affects the sustainable development of the social and environmental component. Secondly, environmental management tools are governed by the national environmental legislation and implemented international agreements, conventions, and so on. Thirdly, we can distinguish the following groups of tools – the first group is related to the system of international and national environmental standards ISO and SSU, the second group is a systematic assessment of the ecological environment and the impact of man-made factors, the third group is related to the environmental development of the region, territories, enterprises (environmental marketing).

A promising area of further research is the systematization of the economic instruments for the implementation of the state environmental policy at the regional level in the context of implementation of the environmental management system.

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