

## СЕКЦІЯ 6 ЕКОНОМІКА ПРИРОДОКОРИСТУВАННЯ ТА ОХОРОНИ НАВКОЛИШНЬОГО СЕРЕДОВИЩА

UDC 504.062(477.7)

**Andryeyeva N.M.**

*Doctor of Economics, Senior Researcher  
at the Department of Economic and Environmental Problems of Coastal Regions  
of the Institute of Market Problems and Economic and Ecological Research,  
NAS of Ukraine*

**Karpenko G.Y.**

*Graduate Student of the Department of Economic  
and Environmental Problems of the Coastal Regions  
of the Institute of Market Problems and Economic and Ecological Research,  
NAS of Ukraine*

### **BENCHMARKING AS A PREVENTIVE TOOL FOR DEFINING RISKS AND STRATEGIC MANAGEMENT OF NATURE MANAGEMENT IN THE LOWER DANUBE REGION**

### **БЕНЧМАРКИНГ ЯК ПРЕВЕНТИВНИЙ ІНСТРУМЕНТ ВИЗНАЧЕННЯ РИЗИКІВ ТА СТРАТЕГІЧНОГО УПРАВЛІННЯ ПРИРОДОКОРИСТУВАННЯМ У НИЖНЬОДУНАЙСЬКОМУ РЕГІОНІ**

#### **ANNOTATION**

In the article, based on the proposed concept of strategic integrated nature management, the existing economic, environmental and social risks of the Lower Danube region. The authors have proved the relationship between the model of regional environmental policy and the targets for regional strategic planning of nature management and the use of benchmarking tools. Scientific approaches to the implementation of benchmarking in the overall system of environmentally directed management of regional development as a preventive tool for assessing the quality of environmental management.

**Keywords:** strategic environmental management; region; benchmarking, integrated nature management; economic and environmental risks.

#### **АНОТАЦІЯ**

У статті на основі запропонованої концепції стратегічного комплексного природокористування розглянуто існуючі економіко-екологічні та соціальні ризики Нижньодунайського регіону. Авторами доведено зв'язок моделі регіональної екологічної політики з цільовими установками регіонального стратегічного планування природокористування та використання інструменту бенчмаркінгу. Запропоновано наукові підходи щодо імплементації бенчмаркінгу як превентивного інструментарію оцінки якості управління природокористуванням в загальну систему екологічно спрямованого управління регіональним розвитком.

**Ключові слова:** стратегічне екологічне управління, регіон, бенчмаркінг, комплексне природокористування, економічні та екологічні ризики.

#### **АННОТАЦИЯ**

В статье на основе предложенной концепции стратегического комплексного природопользования рассмотрены существующие экономико-экологические и социальные риски Нижнедунайского региона. Авторами доказана связь модели региональной экологической политики с целевыми установками регионального стратегического планирования природопользования и использования инструментария бенчмаркинга. Предложены научные подходы к имплементации бенчмаркинга в общую систему экологически направленного управления

региональным развитием как превентивного инструментария оценки качества управления природопользованием.

**Ключевые слова:** стратегическое экологическое управление; регион; бенчмаркинг, комплексное природопользование; экономические и экологические риски.

**The relevance of research.** The Danube region is a European concept, the essence of which can be understood on the condition that its exclusive political, economic, ecological historical role is determined for Europe in general and for the European Union in particular. The Danube region includes, firstly, the totality of the coastal territories of the countries it flows Germany, Austria, the Slovak Republic, Hungary, Croatia, Serbia, Romania, Bulgaria, the Republic of Moldova and Ukraine. Secondly, these 17 countries in the Danube basin, which are members of the Convention for the Protection of the Danube River, and, finally, the countries of Europe, geopolitically gravitate towards the Danube waterway.

In any context, Ukraine is part of the Danube region, however, according to some approaches, only the Ukrainian Danube region. If the basin approach is applied, then the Ukrainian part of the Danube region also includes the Transcarpathian region, part of the Chernivtsi and Ivano-Frankivsk regions. And finally, according to the last approach, the whole territory of Ukraine belongs to the Danube region.

However, in the presented vision, the Ukrainian part of the Danube region is understood as part of the Danube river basin in Ukraine. It administratively includes the territories of Odessa,

Chernivtsi, Transcarpathian and Ivano-Frankivsk regions. Accordingly, these are the basins of the Lower Danube (Delta of the Danube), Tisza, Siret and Prut.

The territory of the Lower Danube region due to its geographical location in the Danube-Dniester interfluvium, the high transit factor is the strategic subregion of the Odessa region and Ukraine as a whole. Despite this, the corresponding territories are now in some decline. The problematic issues and risk-dangers that restrain its economic development [1], are: imperfect transport infrastructure; the decline of the economic complex; lack of developed industry, in particular the fishing industry; dependence on electricity supply from outside Ukraine; low level of water and gas supply; difficult ecological situation. On the basis of the above, the issue of the further development of the methodology and tools of integrated nature management and the strategic environmentally oriented management of the above-mentioned region becomes of particular urgency.

**Analysis of achievements and publications on the research topic.** Such authors as N.I. Khumarova [2], D.L. Pljatsuk [3], Gracheva M.V. [4] and many others considered the theory of the economics of nature management, including the assessment of environmental risks in their fundamental works. The issue of the integrated nature management of the strategic ecologically directed development of individual regions was researched by scientists such as N.M. Andryeyeva [5, 6], B.V. Burkinsky, M.I. Dolishny, M.A. Khvesik, B.M. Kravtsiv, V.M. Stepanov, S.K. Kharichkov [7], etc. As a result of significant scientific research, an important theoretical and methodological basis for carrying out environmental risk research. But the aspect of the study of the features of integrated nature management and the definition of a tool for strategic ecologically oriented management of regions in the direction of minimizing economic and environmental risks are not sufficiently defined.

**Purpose of the article** is the study of the essence of benchmarking as a tool for the formation of an integrated system of strategic nature management and identification of directions for minimizing the risks of the influence of pollution sources on the life support system of the Lower Danube region.

**Statement of the main material.** Analyzing the general trends of the development of the Danube region, we noted that it is one of the most difficult regions of Ukraine from the point of view of both the economic well-being of people and their social protection. Unemployment and poverty, the lack of prospects for the development of important fishing industries, shipping, tourism, a number of old problems with environmental protection – a real picture of the present in the Danube region. Restoring these industries with maximum preservation of the unique nature of the region becomes quite possible with Ukraine's participation in the

implementation of the Danube Strategy, since the Ukrainian part of the Danube Region is rather large and includes the Odesa, Zakarpattia, Chernivtsi and Ivano-Frankivsk regions. Due to its unique geographical location at the intersection of the Danube, the Carpatho-Alpine and Black Sea regions, the Ukrainian part of the Danube region is important for the development of the entire Danube region. The Ukrainian part of the Danube region is unique in terms of natural heritage, because there are valuable representatives of flora and fauna. This region is also important for the future implementation of the declared directions of European integration declared by Ukraine, in particular the implementation of the principles of the European Water Framework Convention, provides for the basin principle of water resources management. In addition, it is important for Ukraine to participate in the implementation of a number of EU directives, in particular, Directive 2007/60/EC of the European Parliament and the Council on «Management and Assessment of Flood Risk» of October 23, 2007 (EU Flood Directive), which should also be included in the implementation of the Danube Strategy in Ukraine.

The expediency of developing and implementing the concept of integrated nature management requires a significant adaptation of existing norms and rules on the use of natural resource potential to European standards. The development of the concept requires a combination of the rational use of natural resources in a theoretical, methodological and practical manner. To this must be added the trends of modern optimization of nature management, preservation of environmental quality in the context of sustainable development of society. For the introduction of integrated nature management, it is necessary to formulate the main theoretical provisions of this concept and introduce appropriate analytical tools, in particular benchmarking tools.

In the scientific literature, integrated nature management is understood as the process of using the natural resource potential, which ensures the rational use of natural resources taking into account various risk factors – ecological, social and economic. The main direction of integrated nature management is the achievement of the greatest results at optimal costs, corresponds to the most important requirement of management. The functional combination in the use of natural resources provides savings by reducing the costs of main production, reducing the cost of transportation of raw materials, the use of production infrastructure. The main features of integrated nature management are: the most complete environmental and economic justified use of the resources of the region, a rational sectoral structure, close interconnection of inter-farm complexes, industrial relations between enterprises.

Integrated environmental management requires close cooperation between enterprises; formation of the market of natural resources and environmental

services; establishment of independent centers for the financing of relevant programs and projects, monitoring of the state of use of resources; on the assessment of natural resources in the regions; creation of a unified network for the use, evaluation, implementation of the natural and resource potential; formation and introduction of quality of life and human capital [7].

Natural and resource potential of the Danube region is represented, first of all, by land, water and recreational resources. The main resource of the land is the land. The region is characterized by significant water resources. The deposits of building materials, including clay, sand and sand-gravel mixtures, limestones and limestone-shell, crushed stone, are being developed. The region is estimated as oil-bearing (Zhovtoyarskoye deposit), available explored reserves of thermal waters, and salt [8].

According to [9], the constraints to the sustainable economic development of the Ukrainian Danube region are: insufficiently developed transport infrastructure; complex state of the sea complex; lack of a developed industry, in particular the fishing industry; dependence on the supply of electricity from outside Ukraine; low level of water and gas supply; a complex ecological situation; unsatisfactory state of educational institutions and health care institutions.

The analysis of existing risks and dangers of environmentally oriented development is the basis for actualizing the need to transform environmental management systems in the region. The region should be viewed not only as a unity of a particular territory, within its resources, productive capacity, population with the whole life support system, as well as a regional management system and a regional institutional environment.

Taking into account the comments made, we formulate our understanding of the object and subject of regional strategic management and planning for regional environmental management.

The object of regional strategic management and planning in the system of integrated nature management is the sustainable social and economic development of the regional system in the unity of its human, natural resource and productive potential and institutional environment.

The subject of regional strategic planning is the regional community (the population of the region) that delegates the rights to manage regional authorities and should directly participate in strategic environmental decision making using civil society institutions, as well as representatives of regional authorities and management and business structures with strategic interests in this region. In other words, the regional community is the ultimate subject of strategic planning by the region.

In all the works on regional strategic planning known to us in formulating their basic concepts, the authors limit themselves to such categories as «object» and «subject» of strategic planning. We

consider it important to introduce in the theory and practice of strategic management of nature management a category such as «the subject of regional strategic environmental management», by which we mean a system for managing the impact of the state, business and population, on improving sustainable development and ensuring the integrity of the spatial system of the state and some regional societies-ecological and economic systems in determining strategic directions of environmental policy.

Before identifying the essence of benchmarking as a tool for regional strategic management and planning of environmental management systems, we formulate key strategic differences from traditional regional planning. In strategic planning:

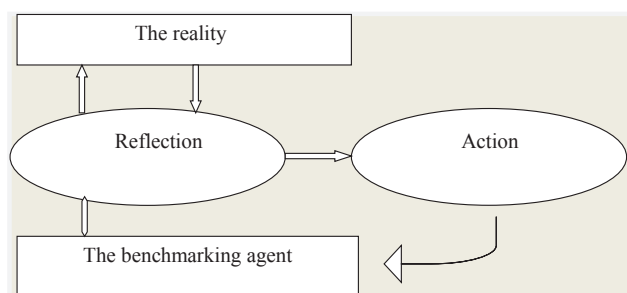
- Is inseparably linked with strategic management; strategic planning is considered not so much as an act of the formation of program documents of socio-economic and environmental development of the region, but as a process of improving the entire system of regional governance, turning it into strategic management;
- Special attention is paid to external opportunities and threats to internal weak and strong sides, as well as existing and potential competitors for a specific territory;
- Are taken into account at the regional level institutes (that is, norms, procedures and «rules of the game»);
- It is important to involve in the process of developing and implementing strategic plans and programs the largest possible number of interested parties and persons (stakeholders), taking into account their views and interests;
- The mechanisms of coordinating the interests of various «actors», as well as the use of coordinated procedures in the process of discussing plans, taking into account the interests of various parties, and finding compromise solutions;
- The idea of monitoring and evaluating the implementation of strategic decisions is implemented, which serves as an important basis for the formation of new cycles of strategic planning.

Particular importance in this context of transformation of environmental management systems and strategic management of the region takes the use of benchmarking tools as a tool for strategic decision-making. There are various scientific approaches to determining the essence of benchmarking. According to the official view of the European Commission, benchmarking is a regular systematic process of comparing the results, for example, of organizations, the functions of managing the region, the processes of the economy, politics or business sectors against the «best in the world» [10]. But we should note that «better» practice is a very subjective concept, and it is impossible to directly transfer the «best» experience of strategic management completely to the unique situation and assumptions of another. What is «better» for one management system in one situation can not be «best»



for another. In this case, the qualification requirements for the composition of management systems management are very important. Indeed, the complexity of the organizational circumstances of managing sustainable regional development among potential evaluation partners is a challenge because of: the difference in the volume of business operations; differences in the market conditions of development of individual industries; differences in budgets and spending positions of regional development; different environmental and social standards of the society of different countries.

Analysis of common approaches to the essence of benchmarking allows us to state that benchmarking of the region is a process of identifying, understanding and adapting best practices from regional authorities and business structures anywhere in the world to help improve the management of socio-ecological and economic systems. Regarding our management object, benchmarking is a tool that will help you improve business processes in sustainable regional development. The concept of environmentally oriented benchmarking, in our opinion, is extremely simple on the one hand; on the other hand it requires a separate theoretical explanation. The basic idea of «learning from others» was the driving force of human progress. In the present, the best world practices of benchmarking are used in the management of individual territories, taking into account the needs of future generations and the social, environmental and business interests of society. This view of the strategic management of nature management is basic in the present and is based on the standards of the international paradigm of sustainable development. In the light of the above definitions, an ecologically oriented benchmarking can be defined as focused on the effect of reflecting the surrounding reality, which leads to the creation of a more effective organization of socio-ecological and economic systems of regional management (see Figure 1).



**Figure 1. Benchmarking as a process of action-oriented reflection**

The rationale for using the benchmarking tool as a priority in the systems of strategic management of the nature management of the Lower Danube region envisages the formation of strategic economic environmental development programs, taking into account primarily the European expe-

rience, as well as the existing practices of the Republics of Moldova and Romania and further cooperation within the Danube Strategy.

**Conclusions.** Summarizing all of the above, we note that the improvement of regional environmental policy in the Lower Danube region should be accompanied by the strengthening of its institutions and institutional structures. It is advisable to focus on the formation at the interregional, regional and local levels of special agencies (corporations) of regional sustainable development as specialized institutions of regional policy created at the intersection of interests of government, business and the population. The existing foreign experience (on the example of the countries of the European Union, the United States, and Canada) of regional policy shows the effectiveness of the functioning of regional development agencies. On the basis of the study, the article highlights the relationship between the model of regional environmental policy and the objectives of regional strategic planning for nature management and the use of the benchmarking tool. The authors also defined the essence of the priority application of the benchmarking tool in the system of strategic management of nature management in the Lower Danube region.

#### REFERENCES:

1. Про схвалення Концепції Державної цільової регіональної програми розвитку Українського Придніпров'я на 2014-2017 роки: концепція від 21.11.2013 № 1002-р / Офіційний вісник України від 08.01.2014. – 2014 р. – № 1. – Стор. 38. – Стаття 7. – Код акту 70913/2013.
2. Хумарова Н.І. Екологоорієнтоване стратегічне планування розвитку територій / Н.І. Хумарова. – Сімф.: ПП «Фенікс», 2011. – 408 с.
3. Пляцук Д.Л. Економічні аспекти оцінки екологічних ризиків у техногенно навантажених регіонах / Д.Л. Пляцук, В.В. Бойко // Механізм регулювання економіки. – 2012. – № 4. – С. 222-226.
4. Грачєва М.В. Анализ проектных рисков: учеб. пособие для вузов / М.В. Грачєва. – М.: ЗАО «Финстатинформ», 1999. – 216 с.
5. Андрєєва Н.М. Проблеми розвитку туризму та рекреації на природоохоронних територіях Дельти Дунаю / С.Г. Нездоймінов, Н.М. Андрєєва // Науковий вісник Одеського національного економічного університету. – 2015 – № 7 (227). – С. 64-77.
6. Андрєєва Н.М. Модель механізму розвитку сільського туризму у євро регіоні Нижній Дунай / С. К. Харічков, Н. М. Андрєєва, С.Г. Нездоймінов// Механізм регулювання економіки, економіка природокористування, економіка підприємства та організація виробництва. – 2011 – № 3. – С. 13-20.
7. Балджи М.Д. Основи діагностики комплексного природокористування регіональний вимір / М.Д. Балджи, С.К. Харічков: Монографія. – Одеса: ІПРЕЕД НАН України, 2008. – 144 с.
8. Программа менеджмента природной среды и план действий для сохранения естественного состояния и устойчивого менеджмента региона Придунайских озер / под общей

- редакцией П. Гориап. Ленделл Миллз Лтд, АРКАДИС Евро-консалт. – Одесса, 2003. – 145 с.
9. Громадське бачення участі України в Європейській стратегії розвитку Дунайського регіону / Зіновій Бройде, Олена Кравченко, Олег Дьяков, Ольга Мелень, Олег Рубель, Ігор Студенніков, Наталія Чижмакова // Екологія. Право. Людина, 2009. – № 8 (48). – С. 69-129.
10. European Commission, First report by the High Level Group on Benchmarking. [Електронний ресурс]. – Режим доступу: [www.benchmarking-in-europe.com](http://www.benchmarking-in-europe.com)