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PRACTICE USE OF ECONOMIC METHODS OF NATURE MANAGEMENT IN FOREIGN COUNTRIES

The paper analyzes the mechanism of environmental management abroad. Systematized economic methods used in the field of environmental protection in foreign countries

В роботі проаналізовано механізм управління природоохороною діяльністю закордоном. Систематизовано економічні методи, що застосовуються в сфері охорони навколишнього середовища в зарубіжних країнах.

Keywords: market methods of nature management, ecology and economic incentives, ecological public policy, ecological standards, ecological funds.

Ключові слова: ринкові методи управління природокористуванням, еколого-економічне стимулювання, екологічна державна політика, екологічні стандарти, екологічні фонди.

The actuality of the theme. In the transitional stage of economic development in the household mechanism of nature management becomes more and more important its economic power, and its own economic mechanism that covers all types of economic incentives for nature management with methods of positive and negative incentives, environmental protection investment, pricing of environmental activity, financial and tax regulations.

The above problem is in sight of scholars its various aspects studied in the works of Ukrainian scientists: V. Burkova, A. Veklych, V. Vernadsky, V. Holyana, P. Haman, A. Danilov, A. Kashenko, L. Melnik, O. Mordvinova, V. Kravtsov, O. Lazor, V. Shevchuk, A. Samsonova, Y. Stadnytsky, I. Yaremchik. Among foreign scholars works to be noted: I. Abalkina, C. Bru, V. Westmen, J. Havel, C. Gunther, D. Meadows, J. Meyer, K. McConnell, P. Nesterov, T. O'Rayodan, L. Harris, S. Shmydheyni, J. Forrester and others.

Despite the intensity of development the impact of the government management on the environmental situation, performed abroad, and the interest of local authors to its individual aspects, Ukraine is still no comprehensive studies of ecological-safety to economic development.

The aim is to study, analyze and summarize the experience of forming and realization of economic mechanism of nature management.

The material of the main study. Market-based measures of natural management – new management practices in this area. These include the creation of a market of quotas for pollutant emissions or natural resources use. The market for pollution rights give businesses or regions, countries additional opportunities to vary the cost of environmental protection. Enterprise (country, region), which reduced their pollution to levels below regulatory or contract level, can sell the difference in the form of quota for pollutant emissions to another enterprise (area - other areas, the country - other countries, etc.). This allows one of nature users to offset the costs of compliance with pollution standards, and others - to pay above-limit amounts of pollution. In the U.S. this method is used since the late 70s of XX century. As of Denmark and the UK used trade of quotas for emissions of carbon dioxide. It is important to note that sales quotas permitted only for the same pollutants (without replacing some other pollutant emissions).

Interstate mechanism of quota sales for polluting was first established by the Convention on Climate Change (1992) and its complementary Kyoto Protocol (1997) [2, p. 50]. The use of market methods of regulation in the sphere of nature management, as in any other field, requires the basic elements of market infrastructure that serves quota trading and provides control (stock markets, brokerage houses, the system of information about supply and demand in the market quota, the system of registration of transactions, monitoring obligations involved in the transaction parties, etc.).

The mechanism of environmental management in Europe and the U.S. worked through the end of the last century. There are models of control mechanism specific to the U.S., Japan and Western Europe. This mechanism is a very complex system, which includes the legal framework, administrative and economic methods of management of environment quality. In Western Europe since 1973. developed a special programs of nature protection [5, p. 1086]. At EU level, the European countries are developing objectives, principles and framework for legislation in the field of environmental protection, and each country implements them independently on the basis of the existing customs and practices.

Direct administrative regulation provides limits on emissions for each source of pollution, which is monitored by public services. If the company does not exceed the emission limit quota fee will still be charged.

In order to establish standards defined standards of environment quality. Given that the state of nature, beyond which you can't get the local authority sets limits for businesses and produce appropriate «license to pollution».

Economic measures of management of environmental quality are very diverse: taxes on products whose consumption inevitably causes environmental pollution (tax on gasoline containing lead), targeted subsidies (to implement a special program setting environmental equipment), tax benefits, etc. Currently, method of grade assignment of fees is widespread. This method is more effective than the appointment of emission limit of pollution.

Economical method involves payment for the use of natural resources and environmental pollution in differential form – a significant price increase in the case of over-limit and penalties for emergencies. Resource users have a choice and the ability to minimize the financial costs by reducing consumption of natural resources through its multiple use with the help of specifically equipment like feedback system (circulating) water. The same goes for equipment to clean emissions and discharges. Pollutant decides by its own what is economically profitable – to pay more for untreated emissions (discharges) or invest in treatment facilities and pay less pollution. For economic method also applies preferential government policies on environmental investment projects, tax benefits for «environmentally friendly» companies, etc. The main thing in economic method is transition from free to paid use of natural resources and monetary compensation for environmental pollution. Today in Ukraine free natural resources are sea water, air, mineral resources of private consumption. The most difficult in economic method use is pricing for use of natural resources and environmental pollution. In the result of continuous environmental degradation cost of natural resources is growing. For example, if the agricultural capital represented as the sum of three components - the cost of land, fixed assets and return of capital (including wages), the first component in structure prevails. In the U.S. it is 0,6%, and in Belgium, Holland, Japan is 0,8% [3, p. 7].

In order of systematization one can group all methods of environmental protection in three groups [6, p. 176]:

1. Non-fiscal methods (introduction of mandatory environmental conditions; changing legal base with account of environment factor; cooperation of activity on a wide base; coercive inducement of nature users to environment-friendly acts; providing the benefits for nature users that use environmentally products and production methods);

2. Methods related to state revenues (licensing of nature; taxes on environmental pollution);

3. Methods related to government spending (targeted environmental investments, state budgetary funding with directly related to environmental protection; ecology-oriented policy jobs, stimulate direct ecology-oriented private economic initiative, state support of environmental areas of research, public funding institutions of environmental protection);

The most popular in the world and the most efficient in the state environmental policy is considered non-fiscal methods in the field of environmental management.

Introduction of environmental (ecological) mandatory regulations and restrictions of economic activities is fundamental. Now introduce the various types of pollution, land use mode, the volume and production processes, the use in the production of hazardous raw materials. The method is widespread in the world. For lack of a method including the impact of ambiguity, complexity of monitoring compliance with established limits, the difficulty of determining the acceptable level of impact on the environment, and subjectivity in decisions of state authorities.

Change in legal terms, taking into account environmental factors is widely used in the U.S., Germany, as a universal character for the state regulation of all natural users. For its effective implementation special regulations are required. There are difficulties in the development of a single ecosystem approach to legislative activity [4, p. 179].

Coercive impulses of nature users to environment-friendly actions implemented by providing impact on the natural resources in the market due to non-financial public support for environmentally actions (awareness of producers and consumers about the environmental hazard, environmental assignment of trademarks, etc.). Methods are widespread in Western countries with a stable economic situation, can enhance the role of civil society in addressing environmental problems and obstacles for monopolizing power and of corruption. The disadvantages of this method include the complexity of the organization, incompleteness rights of the state to take measures against violators of agreements reached, a low environmental impact.

Providing benefits to producers who use environmentally products and production methods aimed at improving the consumer properties of nature, giving environmental aspects of economic activity economic benefits and changing priorities in making economic decisions. As a result of the activities of conservation is profitable. The disadvantage of this method is the ability to bribe certain social groups and manipulating public opinion in the political or competitive purposes.

Territorial planning involves planning restrictions that can't be done in specific circumstances. This method is widely used in the world of nature management, because it sets limits to the required state environmental protection, can reconcile the interests of people and businesses, but the method is not effective when operating on foreign markets. Note that the method can be used for stable and efficient income.

Let's characterize some methods of conservation-related economy state.

Licensing (certification) of nature users involves the sale of licenses for different types of effects on the environment and resource usage. Advantages of the method lies in the fixing of maximum load on the environment, bringing loads of man in compliance with environmental features area, the possibility of a market regulation, relative simplicity, availability of choice polluter to reduce emissions or purchase licenses, the possibility of tightening environmental standards by purchasing licenses. This method requires high costs of control. It is impossible to record cross-border transfer. Many have criticized the method for moral costs – selling rights to pollute nature «off» [3, p. 11]. Entrepreneurs who are in the initial sale of licenses held high costs, the interests of small and medium enterprises are not counted.

Taxes on pollution of the environment based on a flexible tax policy and natural resources users to stimulate joint environmental activities. The disadvantage of this method is the difficulty in determining the impact of ongoing tax policy. The method is widely used in the world of environmental protection.

We now consider methods of environmental protection-related expenses of the state.

Environmental targeted investments - long-term investments to improve the state of the environment during the construction and operation of important environmental projects. The method is widely used around the world because it allows to finance major environmental objects that are important when raising funds from other sources is impossible. The disadvantage of this method is that the funding conservation transferred to taxpayers and violated the principle of «polluter pays» interest nature users to reduce the harmful effects of falling.

State budget funding with indirectly related to the environment, helping to attract additional funds to address environmental concerns and sustainable development of the area, taking into account environmental factors. The disadvantages of this method is the difficulty of isolating the environmental component and justification proportion of funding from the state budget.

Ecology-oriented state employment policy provides for implementation of measures to increase the scope of work for the protection of nature, which are publicly funded. Usually these are special programs for the conservation of existing and creation of new jobs. This reduces unemployment and solve environmental problems. Disadvantage – the complexity of selecting objects work. Require significant public funds.

Direct stimulation of private economic initiative of ecology-oriented financial compensation for additional costs in the manufacture and use in the production of ecological products, processes received fairly widespread in the world. The disadvantages are increasing bureaucracy and corruption risk.

State support of environmental areas of research (research in the field of nature protection and rehabilitation, research areas, etc.) is of great importance for the development of fundamental science. Widespread in all countries.

Government funding agencies of the environment – the only source of funding for state environmental agencies. Disadvantage – the threat of environmental transformation of state structures in the economic sector with narrow interests.

Economic methods of management of the environment protection allows entrepreneurs the freedom of committing environmental action according to its benefit. These methods target improving the environment in accordance with the requirements of society. Economic methods affect the relative prices of products, but these methods are actively involved in market relations, at the same time, the most economical method based on original prices. Proper setting of prices determines the success or failure of the related economic method. For example, payments performed mainly redistributive function, since their relatively low level to directly influence the behavior of nature users, and transferred funds are typically used for the construction of sewage treatment plants, research. Properly installed payments can significantly affect the cost of the manufacturer and its competitiveness.

Fee for contamination is determined by the basis of waste (composition – emissions, discharges of polluted wastewater, solid waste). Its application with the principle of «polluter pays», but is used only in rare cases because they do not have enough incentive role for polluters. This is because if you can determine a fair regarding a particular company, polluter pays for the pollution, it is very difficult to use (lots of caveats and limitations for which shall be conducted systematic research). Simplified calculation leads to a deviation from the fair values. In France, the amount of income payments for environmental pollution accounts for only 0,03% of gross national product (GDP), in Germany – 0,015% of GDP [1, p. 106].

With respect to major polluting enterprises apply user charges that apply to users of treatment facilities for public use (fees local authorities). This method corresponds to the principle of «polluter pays» and reduces the cost of monitoring.

A very interesting method of payment for goods, representing an increase in the price of products that are in production or consumption process pollutes the environment. To this kind of products include, for example, motor oil. There are no clear criteria for separation of producers and consumers as they both pollute the environment this product (at its production or consumption). Over and contradictions – the more the production of dangerous products, the more money gets society. This method is used so far only in Finland and Norway. However, this method has great promise.

Administrative taxes are applicable for control of local environmental authorities. They are characterized by redistribution of funds and are considered ineffective.

Differentiation involves the use of tax preferential taxes for companies that produce «clean» products and excessive tax regulations for companies that produce «dirty» products. The disadvantage of this method is that its application leads to neutralization of revenue. Note that the method meets the principle of «polluter pays» and easy to implement in practice, indicating a promising application of the method.

Subsidies are temporary or free state financial aid for nature users while introducing new environmental requirements. Such subsidies may receive only those companies whose products are essential to society, it provides livelihoods and security. Several options of subsidies are possible: guarantors (scholarships), soft loans or targeted loans with low percentage, application privileges in taxation of enterprises. Grants are used in cases where polluters intends, but is not obliged to implement important environmental activities that are of national or regional significance. Soft loan or targeted loans with low percentage granted to enterprises to implement certain conservation measures. Tax benefits encourage polluters to implement environmental measures.

The system of pledges is a system of mortgage insurance premiums included in the price of potentially dangerous products. When collecting and transfer for disposal of waste treatment plants insured amount (deposit) back to the consumer. This method is widely used to stimulate the collection containers, accumulators, batteries etc. The method is widely used for a limited number of types of products. Usually manufacturers are not interested in the application of collateral because the total cost of collection, transportation and recycling above the amount of additional income.

The use of market principles is on sale and purchase of the right to actual or potential contamination of the environment. In these circumstances, the above-described principle is based on «bubble» principle. These methods are differentiated and conditions for concluding insurance contracts.

Table summarizes the review of economic methods used in environmental management a number of foreign countries.

In the 15 countries analyzed are used about 130 different economic instruments (an average of 10 ratios per country), of which over half are payments of about 25% – subsidies, the rest accounted for by other economic incentives.

Table. Economical methods of nature in foreign countries *

Country	Payment for pollution				Payment of nature user	Payment for products	Insurance payment	Differentiation of working tax
	air	water	waste	noise				
Austria		+	+	+	+		+	
Belgium			+		+		+	
Great Britain				+	+	+		
Germany	+	+		+	+	+		
Denmark					+	+	+	+
Italy		+			+	+		
Canada					+			
Netherlands		+	+	+	+	+	+	+
Norway					+	+	+	+
USA			+	+	+		+	
Finland					+	+		
France	+	+		+	+	+		
Sweden					+	+	+	+
Switzerland				+	+			
Japan	+			+				

Source: compiled by the author [1, 7]

From the data of table can be seen that the combination of economic methods used in different countries, very different from each other. This is due to specific countries, their traditions, natural environment, technological culture production industry specifics.

Changing economic relations in society, called the transition to a market economy has given rise to new emphases in the system of economic incentives. Strengthening the economic independence of public enterprises, the recognition of equality of different forms of ownership, including private, development of the private sector of the economy, including the commercial banking system, leading to a re-orientation from predominantly administrative management to the economic, administrative and economic methods. State ceases to be the sole subject of management, which is under the guise of maintaining the authority of state interests could not ignore the interests of regions, individual businesses, citizens, and so on economic empowerment entities and management of the transition period creates the preconditions for an effective economic mechanism of nature.

In the transition to a market economy model key element of the economic mechanism of nature is price or tax regulations. All the tools of price regulation used in our business practices, can be divided into incentive (tax breaks, subsidies and preferential loans for environmental projects, subsidies for the purchase of environmental equipment bonuses as a result of environmental activities, etc.), forced (resource charges, pollution charges, fines for exceeding limits) and countervailing Measures (redress, creating environmental funds, etc.).

With the stabilization of the economy should also gradual development of our market mechanisms and ecological and economic regulation by creating a market of permits (licenses) for pollution that will attract funds to the decision makers of environmental problems, the creation of market infrastructure ecology. Practical implementation of these instruments in the country today is complicated by the need to develop new standards of environmental quality, adequate current situation, control over their performance, creating organizational structures of agreements, the introduction of an environmental audit.

Conclusions. Environmental problems inherent in today's society are directly related to the four groups of factors: natural, social, macro-economic and those related to the economic mechanism of nature. Therefore, recommendations for the improvement of mechanisms of state environmental management should be based on an analysis of current environmental situation and development trends, which in our country may gravitate toward different options. In particular, the study of ecological and economic evolution of different countries reveals the possible scenarios in Ukraine.

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