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ENVIRONMENTAL-ECONOMIC INSTRUMENTS OF ENVIRONMENTAL POLICY

Abstract.

In modern times, the existing environmental problems have taken on a special global character. This primarily refers to the fact that when planning and implementing the material progress of society, the ecological rules of human life and the vital activity of other beings were not taken into account. In this regard, at present, almost all countries of the world, namely those related to the economically developed, are making maximum efforts to build their environmental policy, form rational use of natural resources and provide financial resources to replenish them. The main role in ensuring environmental policy is played by the state, but in modern society, the state apparatus is not the only subject of environmental policy, but only one of many, along with political parties, as well as scientific and professional associations, and commercial companies. Being

an important part of the policy of all states, environmental policy and its implementation or non-implementation have an impact on the views of citizens towards state power.

Key words: accounting, ecology, environmental policy, environmental instruments, finance.

Introduction.

Administrative and legal instruments exist mainly as environmental regulations in the form of orders and prohibitions. This includes, for example, regulations governing emissions of harmful substances, emission standards, regulations on production technologies and production factors, as well as product standards. Environmental regulations are classified according to the points of application (emissions, processes, production, for example, the establishment of emission limits, conservation and prohibition of construction of the facility, restriction of production), the degree of differentiation (single, group, individual, for example, technical standards for certain emissions, terms of sanitization, industry emission standards), the orientation (initial emission state, quality environmental goals, for example, reducing emissions compared to the previous year, additional emission regulations), and also the obligations and the need for specification (legal orders and prohibitions, for example, limit and regulatory values, technical rules, reservations for issuing permits, conditions for issuing permits, obligations related to issued permits).

Materials and methods of research.

The legal regulation of environmental relations is based on general legal principles due to the systemic links of environmental law with the Kazakh legal system. These are the principles of prevention, correction, precaution, sustainable development, “polluter pays”, proportionality, integration, and accessibility of environmental information.

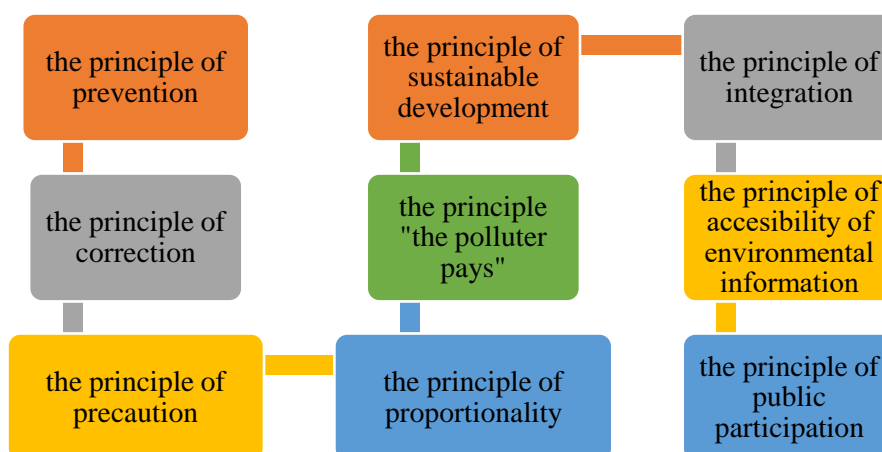


Figure 1 – Principles of legal regulation of environmental relations in Kazakhstan
 Note: [1].

At the same time, the specificity of the objects of environmental relations, which represents both natural formations and resources – sources of meeting environmental needs, determines the specific principles of legal regulation of environmental relations.

Productive and economic instruments of environmental protection policy belong to the general scope of environmental management.

Tools to support environmental management. They fully cover and thereby influence the environmental side of the company's activities, recognize or promote the ethics of the organization as an important factor of competitiveness. Unlike allocation tools, which are used for reducing resource consumption, they do not proceed from relative prices, but use other tools for this purpose, primarily environmental balances and environmental marketing. These economic tools are more suitable for defining the goals of sustainable development than allocation instruments. The latter, due to the application of the marginal cost principle in the analysis of technical capabilities and policy strategies,

as well as due to their ability to indicate market distortions and the consequences of this distortion due to political decisions, are more suitable for achieving the goals of a sustainable mode of production [2].

It should be noted, however, that innovation processes, for example, in the form of energy substitution, which are a result of changes in the prices of factors of production and the combination of the latter, are not necessarily initiated by allocation tools. They also are required to apply economic tools [3]. Thus, at the level of an individual organization, according to the share of expenses on wage and energy costs in the sum of total costs, when prices increase, there may be a stronger concentration on measures to increase labor productivity or initiate energy efficiency improvements, even if energy prices decrease. In addition, innovation processes are becoming increasingly global, i.e. the national increase in energy prices does not have a significant impact on them.

Results and its discussion.

Market instruments of environmental policy are, first of all:

- environmental taxes and payments,
- certificates and compensations,
- regulation of environmental responsibility.

Environmental taxes and payments, as a classic pricing solution, are recorded in the accounts of companies that damage the environment and (or) use natural resources as alternative costs of their activities in the form of taxes and payments [4].

In accordance with the rule of marginal cost prices and on the condition that as much as possible differentiated (marginal) costs are spent on the prevention of environmental damage, they have their effect exactly where the (economic) profit from any measure to reduce the environmental burden is the highest [5].

However, here it becomes obvious that there is still a need for training in working with the category of alternative costs and it is necessary to overcome a lot of resistance along the way. The reason for the predominant use of other tools, such as environmental plans, seems to be that tax issues always affect current policy and strengthen the opposition. Responding to market requirements, they offer great opportunities to reduce individual preventive costs and adaptation costs, i.e. they correspond to the cost-income categories that companies operate with. Their application is relatively simple and they open up the possibility of using additional functions, for example, obtaining fiscal revenues and supporting the implementation of administrative and legal regulations. The barriers to their implementation and the "programmatic resistance" are based, first of all, on parting with the illusion that economic policy is neutral about industries and materials. Sometimes there is a problem of reversal of phases, due to coordination and political reasons, i.e. instead of starting the process with a high "input" tax or payment, which decreases over time, the process often starts the other way around [6]. Certificates are issued rights or loans that operate on the principle of damage prevention with minimal costs. As a result of emissive development or control, the trade in certificates is regionally restricted and requires a mandatory legal framework. The prerequisite, according to the standard price method, is compliance with the established emission level. The distribution of certificates is carried out at an auction or in the form of a gratuitous distribution [7].

The main idea of this tool is as follows: if the marginal preventive costs of an enterprise are lower than the certificate rate, then organizations refrain from issuing (selling their certificates or depositing them in a bank) until their marginal preventive costs reach the market rate of certificates, i.e. the price of certificates will correspond to supply and demand. If the marginal preventive costs of the enterprise are higher than the exchange rate or the price of certificates, they receive a signal that their emissions or (prevention) are still in the safe range of marginal costs [8]. Consequently, they continue to issue or purchase additional certificates until the certificate exchange rate is reached. The optimal compensation of the marginal preventive costs is achieved when the curve of the marginal preventive costs of the enterprise corresponds to the demand curve for certificates in the certificate market. Certificates, like other market-based or allocation instruments, are characterized by the lowest costs in achieving environmental goals. As a mixed instrument, they represent the environmental solution closest to the market, since, for example, unlike environmental taxes and payments, their price is formed directly on

the market or the exchange for the sale of CO2 certificates using the supply and demand mechanism. Therefore, the distortion of market competition is insignificant [9].

Sometimes there are relatively high transaction costs in the form of costs for searching for information, conducting the negotiations, drafting the contracts, and monitoring. Attempts to attract or counter-take into account aspects of reducing emissions, for example, areas occupied by forest and other vegetation, and the choice of only "pleasant" trading partners, also give the way to raise doubts. There is a risk of entering into transactions both between producers (buyers of certificates) to reduce the price (rate) of certificates, as well as between sellers (enterprises, that prevent emissions) to increase the price of certificates; it is also possible to accumulate certificates in anticipation of an increase in their rate [10].

When choosing the best option for the primary distribution of certificates, it can be difficult to avoid creating barriers to entry for new issuers. Based on the specifics of harmful substances, it is necessary to take into account the diffusion, range and duration of exposure. From the point of view of environmental economics, certificate trading is a "mixed instrument", i.e. a combination of tax and payment solutions, negotiated solutions (transferable and tradable property rights and pollution), and problem-setting. Despite these challenges, certificates have compelling benefits and will be central to climate protection tools. Compared to administrative and legal instruments, they are closer to market processes and, as a result, minimally distort competition compared to taxes/payments. However, it should be pointed out that the trade of certificates should not displace other ecopolitical instruments, but complement them [11].

Such an addition will become increasingly important, since, like other flexible ecopolitical instruments, it is not the social costs resulting from climate change that are presented, but "only" the economic ones. The funds accumulated in this way can help to partially finance all public expenditures.

The implementation of the principle of alternative costs also applies to the regulation of material environmental responsibility, i.e. the financial confrontation of an economic entity with the risk of causing damage to the environment increases its economic interest in preventing risk. Until now, environmental material responsibility has been regulated mainly by private environmental law and criminal environmental law. It orientates on the principle of responsibility for guilt. Environmental material liability, supplemented by the fact of innocence for creating a danger and the fact of the reversal of the burden of proof, is practically not applied. The advantage is the implementation of both the principle of responsibility for caused damage and the principle of damage prevention (through the obligation to insure and, sometimes, through material responsibility for creating a danger).

Table 1 – Overview of economic instruments

Charges/Taxes	Subsidies	Deposit-refund systems	Market Creation	Enforcement incentives
Product taxes and charges	Grants	Reusable items	Emission Trading	Non-compliance fees
Tax differentiation	Soft Loans	Disposals	Market Intervention	Performance bonds
Effluent taxes and charges	Tax Allowances		Liability Insurance	
User fees				
Administrative charges				
Note: Compiled by the author				

Tax differentiation aims to stimulate the use of less harmful substitute products or inputs at the expense of more harmful products or inputs. Differentiated taxes on vehicle fuels thus are widely applied

to stimulate, for example, the use of low-sulphur diesel, and the use of unleaded petrol and/or petrol with low contents of benzene.

It is problematic to establish a causal relationship and provide evidence, due to many reasons, as well as the action of temporary and local factors, especially when causing total and remote damage. With the growth of environmental risk, the need for insurance coverage increases, which can not always be assigned to the causer and which is not always feasible for competitive and political reasons, which, in principle, leads to a preference for stock solutions. The problems that arise when trying to evade financial responsibility in the event of bankruptcy remain unresolved. In the field of multinational trade in certificates, the problem of implementing the principle of material liability remains unresolved if a country sells more certificates (or issues) than it actually has (or emits). Special attention is paid to voluntary environmental agreements or individual commitments. This is due to their increasing practical importance, firstly, as a result of their high applicability (mainly due to the freedom of action that they provide for enterprises using this method), as well as the limits achieved in the application of traditional environmental solutions, and, secondly, as a result of taking into account aspects or elements of all other tools.

Each instrument in the PINE database is tagged with one or more of the environmental domains it aims to address: air pollution, water pollution, climate change, transport, land management, etc.

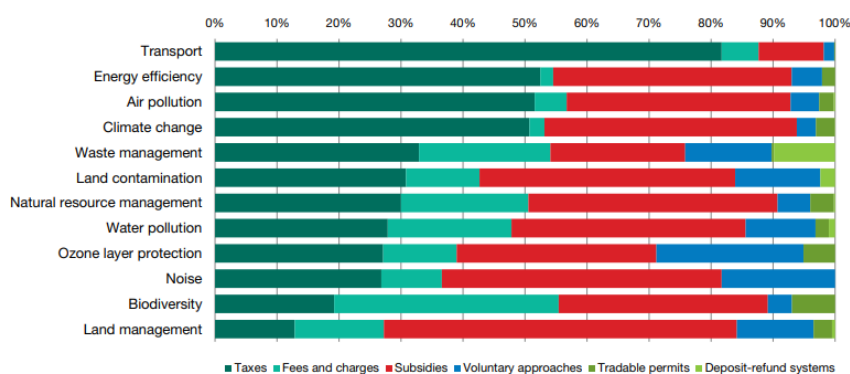


Figure 2 – Drawing – Policy instruments by type and environmental domain

Note: Compiled by the author

Biodiversity was recently added to the list of environmental domains. This allows EXAMPLE all types of instruments associated with biodiversity to be retrieved. Currently, about 490 policy instruments in 52 countries have been identified as biodiversity-relevant, 90% of which are still in force today. As in many other domains, taxes, and fees are among the most frequently used instruments directed at conserving and sustainably using biodiversity. Biodiversity-relevant taxes generated a revenue of USD 2 billion per year on average during 2011-2015, that is, 0.56% of the total revenue from environmentally relevant taxes in OECD countries. The revenue has remained more-or-less constant over the past 15 years.

Conclusion.

The debate about the mechanical application of tools is long out of date, since the choice of tools usually cannot explain the results achieved by the chosen policy. Additional factors that explain certain results are: the strength or competence of the participants, their strategic orientation and conditions of action, as well as the specific nature of the environmental problem being solved. In addition, there are often side effects that sometimes have a stronger impact than the effects planned from using the tools [12]. Such side effects exist, for example, in the form of an informal signal effect or a certain political style, i.e., how a government decision in the field of environmental policy is made and how it is implemented.

The argument for the preferred use of a combination of instruments is also the uncertainty of the monetary assessment of environmental damage or beneficial effect. Therefore, the combination of tools should include such types of tools that take into account both the existing information deficits and the costs of conducting operations.

The results of the analysis showed that it is not possible to clearly identify one of the options that would meet all the evaluation criteria (political operationalization of goals, theoretically-contractual legitimation, compliance with the political and economic system, economic efficiency, institutional manageability). This explains the parallel coexistence of incentive instruments in the Republic of Kazakhstan, despite the increased efforts to unify them. At the same time, quota models receive the highest rating in all parameters, followed by energy supply models, due to low costs for implementing the goal, while competitive models take the last place, owing it to their insufficient static and dynamic efficiency [13].

The argument presented here in favor of a reasonable eco-policy combination also touches on a paradigm shift, which, due to the new quality of environmental problems (especially climate change) and the achievement of the ultimate utility of traditional tools, puts forward demands for innovative environmental policy that have never been put forward before.

The natural environment serves as a prerequisite and a way of existence of all living things; a person influences the natural environment surrounding him, not only consuming its resources, but also changing it, adapting it to meet his needs. Throughout the history of its development, humanity has been distinguished by a consumer attitude towards nature; man has always regarded it as a source of his existence, as a resource, and not as an object of care and protection.

The idea of nature protection arose and acquired legal forms in the nineteenth century. At that time, environmental protection was considered as the protection of natural monuments, their relics and landmark objects from destruction by man. Gradually, the idea of environmental protection has developed into other (including legal) forms of activity, and now the problem of environmental protection and improvement has turned from a regional into a national, and then into an international problem, the solution of which depends on the joint efforts of the entire international community [14].

If the improvement of the environmental parameters of the technological process, the organization of production, and product quality is associated with the creation of new technologies, with the conduct of research and development work, then it is advisable to associate them with capital expenditures;

- costs associated with the maintenance of the environmental protection process, providing it with material resources, devices, tools, and other means of labor;

- costs associated with the organization of the environmental management process;

- expenses caused by the need to recruit labor, train and retrain personnel engaged in environmental activities at the enterprise;

- deductions from the unified social tax to social insurance funds made in accordance with the current legislation at the established rates;

- depreciation of fixed assets and intangible assets of an environmental nature, in particular sewage treatment plants, patents for environmental protection technologies, environmental monitoring tools;

- rent and leasing payments for environmental protection facilities (for example, for the use of special vehicles;

- i) marketing costs of products with improved environmental parameters (including advertising costs);

- payment of taxes and fees paid to the budget and other mandatory payments included in the costs of producing environmentally cleaner products (for example, property tax on additional equipment used to install radiation reduction devices on household appliances);

- unproductive expenses related to environmental protection activities;

- other costs.

In order to more fully identify production costs and determine the cost of certain types of products (works, services), taking into account the specifics of the organization and production technology, it is necessary to correctly establish cost accounting objects and calculation objects.

At the same time, under the objects of cost accounting, it is customary to understand the places of occurrence of expenses, namely specific workshops, production facilities, sites and other structural units, in the context of which the costs of manufacturing products, performing works and rendering services should be grouped.

An important stage of accounting for production costs is the rationing of material, labor and financial resources used in the manufacture (development) of both all products and their individual types, as well as a systematic comparison in the production process of actual costs with established norms, standards, estimates, tasks in order to identify deviations from them.

Initially, the issues of the use and protection of the environment were solved within the framework of the economic activity of a particular state and were considered as the realization of its economic function. In the future, a new term "greening of legislation" appeared in legal science.

Analysis of modern scientific sources shows that the term "greening of legislation" has been identified in modern legal literature; this fact can be considered evidence that the introduction of environmental regulations in various industries has acquired the character of a trend in the legislation of modern states.

The need for environmental regulations in various branches of law was first voiced quite a long time ago; more than thirty years ago, William O. Douglas wondered whether it was possible to turn the cause of environmental protection into a religion and give it a messianic character. He considered this question one of the most important issues of our time. The Messianic character is not always applicable to specific types of modern activity, since it requires an idea capable of forming a set of universally recognized values that neither the state nor individual representatives of a particular society should encroach on [15].

Modern life shows that environmental protection has not become a religion in the form that Dr. William O. Douglas imagined it to be, however, much of what formed the basis of the provisions of his writings has not lost its relevance in today's conditions. An alternative to Messianic ideas about environmental activities is the formation of such ideas in law and law-making, through which it would be possible to give a new look to many sectoral and intersectoral provisions [16].

We would like to present our conclusions on the range of issues raised in this article in the following form:

- the greening of legislation is a specific phenomenon in law; this phenomenon can be considered as a sign of the modern legislative process, where traditional legal implementation mechanisms are applicable in the ecological and legal field, provided that when they are introduced into the industry, they are sufficiently adapted (ecologized) to the corresponding object of legal influence;

- a number of environmental and legal provisions operate through regulatory installations located in the structure of other laws; among these installations are administrative procedural norms and norms regulating economic activity;

- the greening of legislation, its unification (ensuring compliance) with international standards are the most important tools for environmental protection in modern conditions;

- the problem of environmental protection cannot be solved within one region; clearly coordinated actions are needed to ensure an integrated approach to solving a specific problem; international cooperation is needed to develop common effective legal mechanisms that should be "armed" with the ecological and legal branches of states engaged in joint environmental protection activities.

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ЭКОЛОГИЯЛЫҚ САЯСАТТЫҢ ЭКОЛОГИЯЛЫҚ-ЭКОНОМИКАЛЫҚ ҚҰРАЛДАРЫ

Аңдатпа.

Қазіргі уақытта экологиялық проблемалар ерекше жаһандық сипатқа ие болды. Бұл, ең алдымен, қоғамның материалдық прогресін жоспарлау және жүзеге асыру кезінде адам өмірі мен басқа тіршілік иелерінің экологиялық ережелері ескерілмегендігіне қатысты. Осыған байланысты қазіргі уақытта әлемнің барлық дерлік елдері, атап айтқанда экономикалық тұрғыдан дамыған елдер өздерінің экологиялық саясатын құруға, табиғи ресурстарды ұтымды пайдалануды қалыптастыруға және оларды толықтыру үшін қаржы ресурстарын ұсынуға барынша күш салуда. Экологиялық саясатты қамтамасыз етуде мемлекет басты рөл атқарады, бірақ қазіргі қоғамда мемлекеттік аппарат экологиялық саясаттың жалғыз субъектісі емес, саяси партиялармен, сондай-ақ ғылыми және кәсіби қауымдастықтармен және коммерциялық компаниялармен бірге көпшіліктің бірі ғана. Барлық мемлекеттердің саясатының маңызды бөлігі бола отырып, экологиялық саясат және оны жүзеге асыру немесе орындамау азаматтардың көзқарастарына әсер етеді.

Негізгі сөздер: есеп, экология, экологиялық саясат, экологиялық құралдар, қаржы.

ЭКОЛОГО-ЭКОНОМИЧЕСКИЕ ИНСТРУМЕНТЫ ЭКОЛОГИЧЕСКОЙ ПОЛИТИКИ

Аннотация.

В современных условиях существующие экологические проблемы приобрели особый глобальный характер. В первую очередь это относится к тому факту, что при планировании и осуществлении материального прогресса общества не принимались во внимание экологические правила человеческой жизни и жизнедеятельности других существ. В связи с этим в настоящее время практически все страны мира, а именно те, которые относятся к экономически развитым, прилагают максимум усилий для выстраивания своей экологической политики, формирования рационального использования природных ресурсов и предоставления финансовых ресурсов для их пополнения. Основную роль в обеспечении экологической политики играет государство, но в современном обществе государственный аппарат является не единственным субъектом экологической политики, а лишь одним из многих, наряду с политическими партиями, а также научными и профессиональными ассоциациями и коммерческими компаниями. Являясь важной частью политики всех государств, экологическая политика и ее реализация или неисполнение оказывают влияние на отношение граждан к государственной власти.

Ключевые слова: учет, экология, экологическая политика, экологические инструменты, финансы.

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