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CLASSIFICATION OF ECONOMIC-FINANCIAL INSTRUMENTS FOR ENVIRONMENTAL PROTECTION IN THE DOCTRINE OF THE REPUBLIC OF MOLDOVA

Abstract: The diversity of economic-financial instruments for environmental protection requires that they be systematized according to certain common criteria, whether they belong to the fiscal, commercial or customs field, or whether they are applied by various categories of subjects or are provided for in the content of one and the same legislative act . The present article comes with a distinct systematization, gives a consecutiveness that also ensures an efficiency in interpretation, understanding and application by the responsible environmental authorities, but also by those that carry out the control of economic activity.

Keywords: environment, pollution, economic-financial instruments, classification, liability, sanction

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KLASYFIKACJA EKONOMICZNO-FINANSOWYCH INSTRUMENTÓW OCHRONY ŚRODOWISKA W DOKTRYNIE REPUBLIKI MOŁDAWII

Abstrakt: Różnorodność instrumentów ekonomiczno-finansowych ochrony środowiska wymaga ich usystematyzowania według pewnych wspólnych kryteriów, niezależnie od tego, czy należą do dziedziny fiskalnej, handlowej czy celnej, czy też są stosowane przez różne kategorie podmiotów lub są przewidziane w treści jednego i tego samego aktu prawnego. Niniejszy artykuł charakteryzuje się wyraźną systematyzacją, nadaje ciągłość, która zapewnia także skuteczność w interpretacji, zrozumieniu i stosowaniu przez odpowiedzialne organy ochrony środowiska, ale także te, które sprawują kontrolę działalności gospodarczej.

Słowa kluczowe: środowisko, zanieczyszczenie, instrumenty ekonomiczno-finansowe, klasyfikacja, odpowiedzialność, sankcja

The need to classify the economic-financial instruments for environmental protection, in fact, arises from the requirement to systematize them into groups of common instruments according to different parameters, and their grouping is imposed from reasonings that would make it possible to understand the functioning mechanism, the applicability segment, the authorities responsible for their application, the degree of coercion, the category of subjects to adopt them, etc. Moreover, given that these instruments have essentially diversified lately, the need to classify them is also felt at the level of legislation, interpretation and application. And yet, until moving on to the classification of the economic-financial instruments for environmental protection, we are going to show their place in the content of the other categories of environmental protection instruments, because they are recognized by the doctrine in the matter and other than those of a financial nature.

Applied methods and materials. To achieve this article, they are among the most effective and frequently used in legal studies, among which we mention the method of analysis, the method of deduction, the method of synthesis, the historical method, the systemic method, as well as the empirical method.

Results obtained and discussion. After an extensive consultation of the national doctrinal framework, it is worth referring to the classification of environmental protection instruments (in general) made by the author Arcadie Capcelea. It divides all instruments of environmental protection, calling them instruments of environmental policy, into (Capcelea, 2013, p. 117):

- administrative tools;
- economic-financial instruments;
- voluntary instruments;
- information and awareness tools.

In the category of administrative instruments, the author includes the legal framework, as well as permissive acts in the form of environmental authorizations, licenses, ecological certificates, etc., which according to us, these would be the same instruments specific to the economic operator, so they are economic instruments or as we call them new – legal-financial instruments for environmental protection. Or, within the economic activity, the respective instruments have the role of supervising the economic activity with a negative impact on the environment, so they are applicable when the economic activities are carried out. Moreover, the author's placement of eco-brand, eco-design, eco-balance, eco-purchasing

(green), product life cycle assessment, in the category of voluntary means, we think is not the most inspiring. In fact, these instruments shown are nothing more than measures that the economic operator is obliged to implement within his activity, respectively they are also part of the category of economic instruments, although some of them or born from his initiative, initially, as of marketing tool to attract customers with its green products. These later are turned into production and marketing standards recognized and imposed by law on all economic agents, therefore they lean more towards belonging to the category of economic instruments that also involve financial resources from those who follow them respect. Respectively, we see in the given context the necessity of their regulation to impose them through legal norms, that is why we insist on transforming the economic-financial instruments (which currently also include voluntary measures) into legal-financial instruments for the protection of the environment.

In the same context, the author's classification of ecological marketing and the ecological brand in the category of informational and awareness tools is also inappropriate, because they constitute tools specific only to the economic circuit of the products, and the aspect of informing the consumer about the content and how to use to them can only reduce their negative impact on the environment. Moreover, from the perspective of the end of their life cycle, when they will become waste, informing the consumer about their storage, sending for recycling, etc., constitutes an obligation of the producer - economic agent, respectively this is an economic-financial instrument that -mostly aimed only at him.

In conclusion, we consider that the environmental protection instruments included by the doctrine in the category of administrative, voluntary and information instruments, in their essence belong to the field of economic activity, respectively they are economic instruments for environmental protection.

Having clarified our position regarding the concept of the classification of environmental protection instruments, it only remains for us to show that in the compartment of the instruments shown above, considered by the author A. Capcelea as purely economic-financial, it includes only the following:

- economic instruments
- market instruments
- financial-credit instruments.

In the category of economic instruments, the author assigns: emission payments; taxes for the use of natural resources; payments for environmentally hazardous products; liability payments; performance guarantees and deposit systems. In the category of market instruments are included those that refer to the system of commercial pollution permits; emission and environmental quality permits; commercial rights and permits to use natural resources. In the author's view, financial-credit instruments include ecological subsidies; ecological funds; ecological compensation funds and banks for environmental protection (Capcelea, 2013, p. 120). According to some Romanian authors (Rojanschi, Bran., Diaconu, 1997, p. 368), concerned exclusively with the economic aspect of environmental protection, direct measures specific to environmental policies are embodied in the use of the following instruments:

- Legislation, which ensures a high level of environmental protection and enforces compliance with the obligations contained in international agreements and conventions on environmental issues;
- Economic, taxes, subsidies, consignment systems, environmental credits, negotiable pollution permits – which act to internalize environmental externalities, correct the price and contribute to a rational use of natural resources, reduce the level of pollutant emissions and ensure a management waste efficient;
- Horizontal support, ensures the stimulation of scientific research for the development of less polluting or corrective technologies, develops public information systems and ecological education. The indirect measures used for the application of the environmental protection policy refer to the actions regarding the simplification of legal procedures and legislative reforms and the transparency of these processes, access to property, changing the optics regarding the way land is used.

As far as economic environmental protection measures are concerned, they concern the harmonization of economic and environmental policies in the context of structural and sectoral adjustment programs. In the international specialized literature, we also find another style of classification of economic instruments for environmental protection. Well, Pa-

nayoutou Th. divides all economic instruments into two groups: market instruments and command and control instruments, and these taken together refer to:

- property rights;
- creation of specific markets;
- fiscal instruments;
- charging systems;
- financial instruments;
- liability instruments;
- performance bonds and deposit refund schemes.

According to the author Tania García López, there are various classifications for economic instruments that should be classified as follows:

- Taxes: discharge fees, service fees, product fees, administrative fees, tax differentiation.
- Financial aid: subsidies, soft loans, tax reductions.
- Shipping systems.
- Market creation: emission rights exchange, market intervention, civil liability insurance.
- Financial incentives to ensure compliance: non-compliance fees, good final deposits.
- The same author indicates a different classification of economic instruments, namely the one that distinguishes between:
- Economic instruments at the macroeconomic level, within them, would include: environmental insurance, negotiable emission certificates, funds, subsidies, tax deductions and final good bonds
- Economic instruments at the microeconomic level, which would include the following: fees and taxes, fines and penalties, compensation and restitution actions (García, 2018, p. 254).

According to another more general classification, made by the author Michael Böcher, there are different types of pollution control instruments, depending on the mechanisms they use. These tools could be categorized as follows:

- Informational or persuasive tools through which economic operators try to influence people's decisions by providing them with information about the impact of their actions on the environment. This is done through eco-labelling;
- Cooperation tools. These are the ones that use coordination mechanisms, either between private actors or between public and private actors, to reach voluntary agreements with the aim of environmental protection (example: environmental certification);
- Economic instruments that use prices as market signals to encourage or discourage environmental behavior (eg environmental taxes and fees);
- Regulatory instruments that prescribe the behavior to be adapted by consumers, as well as the actions to be avoided under the penalty of civil, contraventional or criminal liability, as the case may be (Böcher, 2012, p. 14).

In one of the famous works of the Australian author (Buckley, 1991, p. 14), we find a rather inspired classification of economic instruments for environmental protection, in the following version:

1. The tools used to control damage to the environment which include:
   a) fees and taxes for ecological damage that are subclassified in:
   b) emission fees;
   c) environmental protection fees;
   d) development fees;
   e) entry taxes;
   f) environmental damage rights and credits such as:
      - emission rights (nets, bubbles, offsets);
      - emission reduction credits;
      - transferable development credits;
      - bonds and performance guarantees;
      - subsidies and rewards;
      - tax concessions and discounts;
2. The tools used to control the consumption of natural resources which include:
   a) tradable quotas (for example, in forestry, fishing and water supply;
   b) resource rents and royalties;
   c) sliding tariffs for utilities.
3. Instruments affecting both damage and consumption which include:
   d) differential excise duties, sales taxes and tariffs;
   e) refundable deposits;
   f) broad taxes such as payroll and capital gains taxes.

With all this diversity of classification, as the author Alina Holt (2015): 190), also claims, the most widespread and used classification of economic instruments for pollution control and natural resource management is the one made by the (Organization for Economic Cooperation,1997, p. 2).

Development, according to which the environmental policy instruments are:

- emission taxes are materialized in direct payments based on certain measurements or estimates of the quantity and quality of the pollutant. Emission taxes cover a wide range of pollutants, often in combination with fines for non-compliance.
- user fees are payments to cover the costs of collective services provided and which are primarily used by local authorities as a means of financing, for example, the collection and treatment of solid waste and sewage.
- product taxes are applied to products that create more pollution when they are produced, consumed or removed, being instituted in order to change relative prices.
- non-compliance fines are imposed on those polluters who do not comply with the operational requirements and regulations of the environmental policy.
- warranty reimbursement systems represent payments made when purchasing a certain product, payments that are reimbursed in whole or in part when the product is returned to the seller or a specialized treatment facility.
- licenses, rights and pollution quotas (tradable, transferable) are based on the argument that any increase in emissions or the use of natural resources must be compensated by a reduction of an equivalent amount of emissions, sometimes even more. For example, when the law sets a certain ceiling on the level of emissions, polluting firms that exceed this ceiling will have to buy „rights" or licenses to pollute from other firms in the same area and are required to reduce emissions by an amount equal to the additional pollution emitted by the new activity.
- performance guarantees are used to correct the behavior of polluters and involve the payment of deposits in the form of a guarantee, to guarantee compliance with environmental requirements or the rational use of natural resources. This guarantee will be reimbursed when the polluters demonstrate compliance with the imposed environmental requirements.

Regarding the classification of economic instruments for environmental protection provided by the legislation of the Republic of Moldova, the most extensive and relevant classification is found not in specialized sources (theses, scientific articles, manuals, etc.), but even on the official page of the Environmental Agency.

According to the information systematized on the Agency's portal, environmental economic instruments are of two types:

1. coercive (coercive) that refer to taxes, penalties or other forms by which compliance with the legislation in force is sought;
2. incentives that refer to subsidies, loans, or other mechanisms to stimulate consumers and producers in order to change behavior towards the environment and to increase income for environmental investments.

What is true, the information quoted from the source we are referring to, lays the basis for the classification of environmental protection instruments and the system of the respective measures applicable in other states. In the context it is shown that currently, in many countries with economies in transition or developing, 19 types of environmental economic instruments are applied, classified in several subfields:

1. Property rights:
   - changes in ownership, granting of rights of use and their development.
2. Market creation:
   - negotiable emission permits.
3. Responsibility:
   - extended producer responsibility mechanisms:
4. Charging systems:
   - effluent taxes;
   - usage fees;
   - product taxes;
   - administrative fees;
   - impact taxes;
   - fees for access to resources;
5. Fiscal instruments:
   - pollution taxes;
   - entrance fees;
   - import taxes;
   - financial support in the introduction of new technologies;
   - subsidies for environmental research and development expenses.
6. Storage systems – refinancing:

- deposit schemes - refinancing to encourage recycling;
- environmental performance, ecological reconstruction expenses;

7. Financial instruments:
   - financial subsidies;
   - low interest loans and non-refundable loans;
   - sectoral funds.
8. Among the environmental economic instruments mentioned above, the following are used in the Republic of Moldova:
   - fees for the use of natural resources;
   - payments for environmental pollution;
   - taxes for goods that in the process of use cause environmental pollution;
   - extended producer responsibility mechanisms;
   - the national ecological fund.

Finally, we will briefly show all the instruments that fall into these five major categories mentioned above, not before specifying that in the Republic of Moldova these are based on the „polluter pays" principle and the „extended producer responsibility" principle", intended to change the behavior of the ordinary producer with that of the consumer in the activity of production and consumption, adopting a cautious and environmentally friendly behavior.

1. The tax system for the use of natural resources provided for in the content of the Fiscal Code of the Republic of Moldova, which establishes in the compartment of title III:
   - water fee;
   - the fee for carrying out geological surveys;
   - the fee for carrying out geological explorations
   - the fee for the extraction of useful minerals;
   - the fee for the use of underground spaces for the purpose of the construction of underground objectives, other than those intended for the extraction of useful minerals;
   - the tax for the exploitation of underground constructions for the purpose of carrying out the activity of an entrepreneur, other than those intended for the extraction of useful minerals;
   - tax for wood released per foot.
2. The payment system for environmental pollution regulated by Law no. 1540/1998 on payment for environmental pollution (art. 6, 9 and 10) which includes:
   a) payment for pollutant emissions of stationary sources in atmospheric air
   b) payment for discharges of pollutants with waste water:
      - in water resources and sewage systems;
      - in receiving tanks, filtration fields, collectors of drains for must of animal manure;
      - with the water discharges from the fish ponds and with the discharges from showers on the territory of the enterprises (meteoric waters),
   c) payment for waste storage in authorized sites (waste depots).

As a remark, the method of collecting payments for emissions of pollutants into the atmosphere, for the discharge of pollutants with waste water, as well as for the storage of waste takes place by anticipation, a fact appreciated by the current doctrine to which we also join. Or, according to point 5 of annex no. 3 to Order no. 15/2019 of MADRM, payments for environmental pollution are calculated independently by the polluters and are paid to the annual state budget, by February 25 of the following management year, with the presentation of the respective account of the State Fiscal Service.

Among other things, according to a study carried out in the field of the applicability of economic-financial instruments for environmental protection, a very comprehensive system of payments for emissions has been operating in our country since 1998, targeting around 1000 air pollutants, 27 water pollutants and five different types of waste. In some cases, the permissible limit emission values, inherited from the Soviet era, are stricter than those in the EU. The nominal value of the payment per unit of pollution has remained unchanged since 1998. Although the payments for the emission of some air pollutants are high compared to other CIS states, compared to the level of payments levied in Western countries, they remain very low (for example, in 2001, for one ton of SO emitted in Moldova a payment was levied of US$30, compared to US$1 in the Russian Federation and US$1800 in Sweden).

Also, according to the study under discussion, fines for non-compliance with environmental norms are very small and are equivalent to 3-5 minimum

wages (about 4.5 – 7.5 US dollars) for accidentally violating the requirements and increase five times if they are exceeded permissible limit emissions. The application of fines has always been a weak point, reflecting, on the one hand, the result of the policy of reducing the number of environmental inspectors promoted in recent years and, on the other hand, the existence of unofficial payments.

The tax for goods, which in the process of use cause environmental pollution provided by Law no. 1540/1998 regarding payment for environmental pollution (art. 11) which applies to the following categories of goods:

1. the goods indicated in annex no. 8 to Law no. 1540/1998;
2. primary packaging made of plastic materials (classified under tariff headings 3923 21 000, 3923 29 and 3923 30) containing products;
3. primary composite packaging containing products;
4. primary aluminum packaging (classified under tariff heading 7612) containing products;

The "extended producer responsibility" mechanism represents all the obligations imposed on producers, either individually or collectively, for the recovery and recovery or recycling of end-of-life products, which was introduced in the Republic of Moldova with the entry into force of Law no. 209/2016 on waste (art. 12). It is a new concept used in environmental policy, which acts to prevent pollution and minimize waste, stimulating clean production, based on the "polluter pays" principle.

This mechanism requires the undertaking by the product manufacturer, obligatorily, of the measures to accept the returned products and the waste that remains after the use of the respective products, to organize the collection and return systems of these products through commercial centers, collection points of municipal waste or individual or collective systems established by themselves.

The National Ecological Fund (FEN) is an economic instrument, established within the state budget, intended to finance programs and projects in the field of environmental protection, managed by the Ministry of the Environment.

So, based on all the concepts of classification of the economic instruments of environmental protection shown above, in the following we will present our own concept of their classification which, in fact, comes to regroup all these instruments according to a different logic and consecutiveness.

Thus, according to us, the economic-financial (legal-financial) instruments are to be classified into:

1. Anticipatory economic-financial instruments for environmental protection that include:
   - fees for the use of environmental components charged in advance and consisting of:
   - taxes for importing goods with environmental impact;
   - taxes for goods that in the process of use cause environmental pollution;
   - fees for the provision of services and the execution of works with impact;
   - payments for environmental pollution;
   - the costs for carrying out the environmental protection mission
   - costs internalized in the price of the product;
   - costs for anticipating self-protection measures against negative effects on the environment.
   - financial guarantees intended for environmental protection through improvement;
   - ecological funds;
   - mandatory contracts in the field of environmental protection;
   - green purchases.
   - authorizing activities with impact through permits and licenses.
2. Economic-financial tools to involve the producer-consumer relationship in the common mission of environmental protection:
   - Ecodesign;
   - Ecological labeling;
   - Ecomarketing;
   - The packaging return system.
3. Economic-financial instruments to stimulate the initiative of the economic agent to resort to methods and technologies harmless to the environment
   - Subsidies;
   - Preferential loans;
   - Green bonds;
4. Economic-financial control instruments in the field of compliance with environmental protection standards
   - Tracking the product life cycle;

- Integrated pollution control;
- Supervision of the production process;
- Reporting of economic entities about the performance in the field of environmental protection;
- Ecological agreements to reduce the impact of economic activity on the environment.

In conclusion**,** this being the style of grouping the economic-financial instruments for environmental protection, we also insist on coming with the remark that the list of instruments is not an exhaustive one, to be completed with new and new protection instruments determined by the new needs that humanity will go through, and this fact, obviously, will also determine the periodic review of the classification concept, both the one presented by us and those that exist differently around the world. We would also like to specify that the following two chapters of the work are structured specifically according to the version presented above, being all presented in detail in the same sequence.

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