

**ACADEMY „ȘTEFAN CEL MARE” OF THE  
MINISTRY OF INTERNAL AFFAIRS OF THE  
REPUBLIC OF MOLDOVA  
DOCTORAL SCHOOL „CRIMINAL SCIENCES AND PUBLIC LAW”**

**With manuscript title  
C.Z.U. 349.6:33(043.2)**

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**LEGAL-FINANCIAL TOOLS FOR ENVIRONMENTAL  
PROTECTION WITHIN ECONOMIC ACTIVITY**

**SUMMARY OF THE DOCTOR'S THESIS IN LAW**

**Specialty: 552.04 - Land and environmental law**

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**Chișinău, 2024**

The doctoral thesis was developed within the „Criminal Sciences and Public Law”  
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The support will take place on April 12, 2024, at 2:00 p.m. at the „Ștefan cel Mare” Academy of  
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The summary and doctoral thesis can be consulted at the National Library of the Republic of  
Moldova, the „Tudor Roșca” General Library within the „Ștefan cel Mare” Academy of the  
MAI, on the website of the National Agency for Quality Assurance in Education and Research  
([www.cnaa.md](http://www.cnaa.md)) and the web page of the Criminal Sciences and Public Law Doctoral School  
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## CONCEPTUAL MARKINGS OF THE RESEARCH

### **Actuality and importance of the addressed problem.**

A not gratifying reality that humanity, unfortunately, realized too late, is the fact that the climate changes facing today has direct consequence of its careless attitude towards everything we call environmental values. It is an axiom that can no longer be contested with any kind of argument. Too much was relied on the regenerative capacities of the natural environment, immeasurable capacities, which gave the feeling that nature could be exploited endlessly, which was not the case. As a consequence, the security of tomorrow's existence of life on Earth is becoming more and more doubtful, a fact that requires immediate recourse to a radical reconsideration of the concept of environmental protection.

In this context, we consider rational and fair the blame brought to those who, through economic activities, have exploited and continue to exploit environmental components in excess, a cause that is characterized by a special preponderance among the multitude of competing ones. However, today it is no longer news that advanced technologies allow the use in the production process of an enormous amount of natural resources (water, soil, underground resources, air and forest vegetation) as raw materials extracted from places once inaccessible to humans. Thanks to this relentless process, the consumption capacity also increases, and with it the capacity to generate residues, all these considerations having as their genesis: demographic growth, increasing existential comfort, increasing market demand, etc. Limits have been reached where life is suffocating, natural resources are in the terminal phase of their transformation into mere goods of temporary use and limited utility, and regrets, accusations and assumptions that nature will once again find the solution to return to a state of equilibrium, so as he has done every time, they no longer have their place.

We recognize that, in recent decades, the governments of the world's major states have significantly changed their attitude towards the environment, obviously, when they realized that economic momentum sometimes generates adverse effects disproportionate to the advantages obtained through the reckless exploitation of environmental components. As a result, it was considered necessary to resort to environmental protection measures by creating a climate that would ensure a controllable balance between the economy and the environment. In this way, the phenomenon of economic activity was strongly interpenetrated and influenced by new concepts, such as: "green economy", "eco-innovations", "environmental economy", etc., but in the end it was found that these are not enough effective and does not solve the problem completely.

At the same time, the opportunity and topicality of the study that we are carrying out in this paper is clearly highlighted also against the background of the efforts made by the national authorities towards the achievement of the objectives of the Environmental Strategy for the years 2014-2023, this, in turn, being developed in the context of changes produced during the last years in our society, in the structure of the national economy, but also in the existing legislative framework. To be sure, the proposed study targets a narrower compartment that tends to transpose only one of the priorities of the Strategy, namely, the one provided for in Chapter II, point 4 [81]: "reducing the negative impact of economic activity on the environment and improving the measures of prevention of environmental pollution".

### **Description of the situation in the research field and identification of the research problem.**

Considering that the issue of environmental protection within the economic activity, exercised specifically through legal-financial instruments, is not reflected in any of the doctoral theses in the country, we believe that the research on this topic becomes quite timely and welcome, especially for the times in which we live. However, the issue of environmental protection through economic-financial instruments is tangentially researched by established domestic authors, among whom we mention Trofimov I., Zamfir P., Ardelean G., Capcelea A., Iordanov R., Crețu A., Așevschi V., Cărbune R., Vlaicu V., Avornic Gh. and Zamfir N. Among the Romanian doctrinaires who were constantly concerned with the issue of environmental protection, including through financial measures, we mention Duțu M., Duțu A., Lupan E.,

Rojanschi V., Bran F., Marinescu D., Gorunescu M., Bădescu S.V., Durac Gh., Eni C., Grădinaru Gh., Holt A., Hristea Th., Ionescu C.

The reasoning that made us choose the doctoral research topic is determined by the resonance of the negative impact on the environment generated by economic activities related to the insufficiency of the regulations that would establish and implement perfect legal-financial instruments, similar to those existing at the European level, even more, innovative legal measures that can be combined with fiscal, financial or commercial ones. However, in the era of globalization, the unification of policies, especially those regarding environmental protection, become indispensable in the conditions and realities in which pollution knows no borders. For the Republic of Moldova, the unification of these policies, initially at the European level, is not only a necessity, but even a condition that stands in the way of achieving European integration aspirations.

**The purpose and objectives of the paper** aim to identify the issue of economic-financial instruments for environmental protection, as well as solutions regarding the completion of the categories of existing instruments, but also the improvement of the legal framework for their application.

In order to achieve the expected goal, the following research objectives were drawn:

♣ Evaluation of the degree of scientific approach of the legal-financial instruments for environmental protection in the economic activity at national and international level.

♣ The analysis of the current concepts that are the basis of the legal-financial instruments for environmental protection established by the legislation of the Republic of Moldova, the identification of the problems that determine their ineffectiveness, as well as the argumentation of the reasons and advantages that determine their reconsideration in the context of the inevitability of economic progress.

♣ Elucidation of the specifics of the principles that underpin the idea of bearing costs, prohibitions and safety measures of a financial nature by the economic operator in favor of environmental protection, but also of other proposed new instruments.

♣ Identification of legal-financial instruments intended to anticipate negative effects on the environment, which, at the same time, become functional and rational in the context of the rules for conducting economic activity in the Republic of Moldova.

♣ Formulation of mechanisms for combined application of financial-fiscal measures in the field of environmental protection.

♣ Establishing the mechanism to control compliance with environmental protection standards by economic entities.

♣ Identification of new categories of specific sanctions, applicable to economic entities for violating the environmental protection regime.

♣ Formulation of general conclusions and submission of the necessary recommendations as the final result of the research.

#### **Scientific research methodology**

In order to achieve the predetermined goal, within the research activity we used the most effective research methods in the legal field, namely:

*The method of historical analysis* applied in the research process of the genesis of the first theories and reasonings that were the basis of the idea of applying legal-financial instruments for the purpose of protecting the environment against the impact of economic activity;

*The method of comparative analysis*, aiming to identify the most appropriate, functional and viable economic-financial mechanisms for environmental protection contained in the legislative framework of highly developed states with the subsequent possibility of estimating the existence and mode of application at the national level.

*The systemic method* is widely used in the overall research process by correlating the rules belonging to the various legal institutions of financial, commercial, fiscal, customs law with the rules and requirements imposed by the branch of environmental law, following, at the

same time, the points of connection, the degree of adaptability and possible results of the implementation;

**Scientific novelty and originality.** The element of scientific novelty is identified by the series of innovative suggestions offered, both at the theoretical and the legislative level. On a theoretical level, a series of notions of the researched field were formulated according to an own concept, which expresses new visions of definition, and on a regulatory level, the scientific novelty is reflected by the series of proposals to modify and supplement some normative acts (art. 34 paragraph (3) of Law No. LP98/2022, Article 10 paragraph (3), Article 14 paragraph (3) and (4), Article 11 paragraph (6) of Law No. 1540; art. 84 of Law no. 1515/1993; paragraph (3) art. 121 of Law no. 231/2010; art. 181 of the Criminal Code; art. 43 of Law no. 149/2012; letter c.), paragraph (2), art. 30 of the Forestry Code; Law no. 115 of 09.06.2005; LIT b) art. 72 of Law no. 131/2015; Art. 24 of Law No. 131/2015; an article (art. 171) from the content of Law no. 1134/1997).

**The theoretical significance of the work** is reflected by the concepts of formulating and systematizing economic-financial instruments for environmental protection; establishing the theoretical basis for substantiating and affirming a new field of study and research, such as that of environmental economics; development of the national scientific base in the field of research on financial instruments for environmental protection; guiding the legislator in the process of drafting legislation in the field of environmental protection, but also connecting existing laws to the international legal framework.

**The applicative value of the work** is related to the demands imposed by the state policies in the field of science and innovation, it predicts a positive and immediate impact on the social-economic development plan of the country, of the science of law, in general, but also of environmental law, in particular. The work can guide the legislator in the process of drafting legislation in the field of environmental protection, but also in connecting existing laws to the international legal framework. Also, the result of the study will be of great use to the environmental authorities in the application of legislation and sanctions against economic operators who do not comply with the standards and measures to reduce the impact of economic activity on the environment.

**The main scientific results** submitted for support will show its practical utility through the immediate impact on the quality of regulations in the field of environmental protection, but certainly also the economic one, the economy as a whole, which will resort to development through the use of renewable resources, with harmless technologies much more efficient and more productive.

**Implementation of scientific results.** Absolutely all the ideas, hypotheses and solutions offered by this work can be taken over in the framework of teaching activities, as well as those of a scientific nature, in the development of bachelor's and master's theses, for training the staff of the public authorities of the Ministry, in the matter of the application of the instruments economic-financial environmental protection.

**Approval of results.** The main results of the research were presented and debated in various scientific events held in the country and abroad. Specifically, the scientific results of the work are published in the content of seven scientific articles published in the materials of scientific conferences, as well as in recognized national and international journals.

Also, the results of the scientific activity carried out during the elaboration of the doctoral thesis were highly appreciated by the environmental authorities, but also by the academic environment concerned with the issue of environmental protection through legal-financial instruments.

**Publications on the topic of the thesis.** On the topic of the doctoral thesis, 7 scientific articles were published in specialized scientific journals accredited in the country and abroad.

**Keywords:** environment, pollution, environmental impact, environmental protection, environmental liability, environmental policies, economic-financial instruments, economic activity, financial control, economic circuit, waste, recycling, products and services with impact.

## THESIS CONTENT

The introduction of the thesis reflects the main points through which the necessity and importance of the work are argued, these being presented by the following sections: the actuality and importance of the problem addressed, the purpose and objectives of the thesis, the research hypothesis, the scientific research methodology, the scientific novelty, the solved scientific problem, the theoretical importance and the value application of the work and summary of the sections of the thesis.

Chapter I of the work, with the generic: "Study on the degree of research in the field of environmental protection through legal-financial measures", contains the analysis of the scientific-doctrinal framework of the examination of the economic-financial instruments of environmental protection at the national level. In the same compartment, the degree of scientific approach to the legal-financial measures of environmental protection in the economic activity at the international level is evaluated.

Therefore, the study in the field of environmental protection through economic-financial measures, carried out up to this date in the Republic of Moldova, can be presented in a relevant way only by separating all the research into three large categories, dictated by the status of the materials in which they are contained. "Therefore, the economic and financial instruments of environmental protection, obviously, supported and implemented with the support of regulations in the field, were researched from the declaration of independence of our country until the writing of this doctoral thesis in various analytical studies (performance studies in the field of environmental protection, reports, analyses, evaluations), scientific works in the form of doctoral theses, scientific articles and monographs, as well as in scientific-didactic sources in the category of manuals, course materials, guides, etc." [24, p. 116].

Regarding the study of the essence of the legal-financial instruments for environmental protection identified in the content of the analytical works, it is materialized quite relevantly, in the text of the two performance studies in the field of environmental protection carried out by the UN Economic Commission for Europe (UN EEC ) at the request of the Ministry of Environment of the Republic of Moldova in 1998, respectively, in 2005.

So, the direct analysis of the financial mechanisms of environmental protection is contained in Chapter 2 of Part I of the Performance Study, called "Integration of ecological requirements into the economy", where information about taxes and payments for the use of natural resources is presented; the regulatory instruments of the state of the environment; ecological funds and public spending; environmental protection in the privatization process; conclusions and rigorous recommendations [19, p. 186].

The second Performance Study in the field of environmental protection, carried out in 2005, aims to evaluate the effectiveness of the economic-financial instruments suggested by the 1998 study and their functioning after that date. In the context shown, it is found that the efficiency of the market instruments used have increased considerably during the period after 1998, and the more appropriate formulation of prices reflects the real costs based on the principle of total reflection in prices of external costs. However, compared to developed states, the Republic of Moldova remains at the level of countries that invest little to support environmental protection measures, the total expenses in this regard being about 0.8% of GDP [20, p. 182].

Another scientific-practical study carried out at national level, which, of course, also addresses the aspect of economic-financial measures for environmental protection, is the one from 2003, developed by the National Institute of Ecology, designated in this sense by the Ministry of Ecology, Constructions and Development of the Territory [21, p. 144].

The following national report on the state of the environment in the Republic of Moldova, prepared by the central authority for environmental protection, in 2006, mentions in the chapter on economic and financial instruments for environmental protection that "as a result of the efficiency of the mechanism for collecting payments for environmental pollution and with the introduction of the payment levied on the import of goods that in the process of use cause environmental pollution, the accumulations in the National Ecological Fund have increased

considerably, for the year 2006 the total revenues constituted approximately 76 million lei" [22, p. 103].

In another study carried out in 2010 on the occasion of the evaluation of the degree of harmonization of the legislation of the Republic of Moldova with the standards of the European Union, it is noted, with great regret, that "the economic instruments in the field of the environment in the Republic of Moldova are quite limited and include, first of all, environmental taxes for the use of natural resources, pollution taxes and fines for non-compliance with legislation in the field" [11, p. 141].

The last and most recent study carried out in 2019 at the national level on the segment of ownership, application and efficiency of economic-financial instruments for environmental protection does not provide us with gratifying information. According to the data provided, "in 2019, receipts from environmental taxes to the state budget were 4.9 billion lei or 2.3% of GDP, and state expenditures for environmental protection were only 200 million lei, which means 0.1% of GDP, being the country with the lowest investments in the environment, relative to GDP, in Europe" [9].

Under the doctrinal aspect of approaching the issue of legal-financial instruments for environmental protection in the content of scientific works (doctoral theses, scientific articles, monographs), we express our gratitude to the local authors who have completely dedicated themselves to the researched field, offering us precious materials that inspires and motivates us to sacrifice in the common mission that concerns us. Among the distinguished researchers in the field, it is worth mentioning Professor Arcadie Capcelea, Dr. Pavel Zamfir, Igor Trofimov, Grigore Ardelean, Alina Rotaru, Gh. Duca, V. Vlaicu, A. Crețu, R. Iordanov, G. Mărgineanu who dedicate their days daily time for research in the field of environmental protection in the Republic of Moldova.

In a more recent work by the distinguished author Arcadie Capcelea, the latest financial instruments applicable in economic activity aimed at preventing negative effects on the environment generated by this.

In the view of the cited author, as a general conclusion, "the effective application of economic-financial instruments depends on several conditions. Thus, the economies in which they are expected to be applied must feature (or make real progress towards) free markets, where property rights are clearly defined, where businesses are largely private, and where environmental norms are established and widespread (without exceptions), as well as where there is a liberalized price system" [4, p. 120].

On a scientific-doctrinal level, on the occasion of researching the particularities of ecological damage repair, the renowned promoter of legal values in the matter of environmental protection, Dr., associate professor. Grigore Ardelean, initially in his doctoral work [1, p. 177], and later, in a monograph published in an international publishing house, addresses the subject of economic-financial measures to rehabilitate the ecological damage from the account of ecological funds, funds constituted by polluters' contributions, funds made up of mandatory environmental insurance premiums.

An important work that completes the theoretical framework under discussion is that of the author Natalia Cogălniceanu [5, p. 123-138], with the title: Direct regulations and economic instruments for environmental protection, which highlights the main causes of the insufficiency and inefficiency of economic levers of environmental protection, the perspectives of reconsidering some attitudes on the part of those who carry out economic activities with impact, but also some proposals to complete the legislative framework in the field of environmental protection and not only, some interventions are also proposed at the level of legislation that regulates the economic field with all what the system of production, marketing, service provision, taxation, customs duties, etc. entails.

About the importance and the determining role of the legal-financial instruments of environmental protection applicable to economic activity, the author Alina Rotaru also explains

through the content of her doctoral thesis, in the section that lists the indispensable dimensions of the practical and effective realization of the mission of environmental protection [16, p. 44].

The study on the international doctrinal context that addresses the issue of legal-financial instruments for environmental protection indicates the considerable contribution made to the development of research on economic-financial instruments for environmental protection, by the authors: Mircea Duțu, Ernest Lupan, Daniela Marinescu, Vladimir Rojanschi, Roland Colin, Philippe Bontems, Dominique Bureau, Chiara Gambelunche, Davide Pettenella, Laura Secco Ralf Buckley E.B. Tyutyukina, T.N. Sedash, A.I. Danilov, Sheluhina E.A.

As conclusions to the study on the foreign doctrine, we bring the following findings:

- The European space knows a long period of regulation and application of economic and financial instruments for environmental protection, a fact that allowed them to be experimented over time, chiseled and perfected, the effect of which was felt, which determined other states to resort to them.

- States from other continents than the European one, we mention here Australia, Japan, Mexico, as well as the states from the North American continent, show close collaboration and competition even in the segment of consecrating new economic instruments for environmental protection, promote a policy of stimulating the intention of economic agents to resort to the production, sale of goods and provision of services through environmentally friendly methods.

- In the states of the former Soviet Union, with the exception of the Republic of Moldova, the legal-doctrinal framework for the regulation and research of environmental protection instruments of an economic and financial nature is underdeveloped characterized by their limited existence in the legislation of countries such as Azerbaijan, the Republic Belarus, Ukraine even.

***Chapter 2, entitled: „The concept of intervention through legal-financial instruments for the protection of the environment within the economic activity”,*** is intended to examine the concept of intervention through legal-financial instruments for the protection of the environment within the economic activity; defining the main notions of the researched field; the classification of legal-financial instruments for environmental protection; presentation of the basic principles and functions of the legal-financial instruments for environmental protection.

Regarding the definition of certain terms, in the described compartment we managed to define a series of notions specific to the field of environmental protection, such as: environment, environmental protection, pollution, economic activity, as well as economic-financial instruments for environmental protection.

We managed to bring our own classification to the economic-financial instruments for environmental protection as follows:

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;
- the 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;
  - authorisation of activities with impact through the permit and license system.

2. Economic-financial instruments to involve the producer-consumer relationship in the common mission of environmental protection:
  - ecodesign;
  - ecological labeling;
  - ecomarketing;
  - 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 life cycle of the product;
  - integrated pollution control;
  - supervision of the production process;
  - reporting of economic entities about the performances in the field of environmental protection;
  - ecological agreements to reduce the impact of economic activity on the environment.

This being the style of grouping the economic-financial instruments for environmental protection, we also insist on coming with the finding 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 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 point out 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.

In mentioning the principles and their description, we started from the fundamental principles, later moving on to those strictly specific to the economic instruments for environmental protection identified in the national specialized literature as follows:

***The "polluter pays" principle*** is the most well-known in environmental protection, especially in terms of the economic-financial aspect of exploitation of environmental components, being also the principle on which the entire institution of economic protection instruments is based. Adopted, for the first time, by the OECD in 1972, the principle in question referred to the requirement to impute to the polluter the costs of measures taken by public authorities to maintain the environment in an acceptable state. [7, p. 242].

***The precautionary principle***, known for the first time from the content of the Declaration of the UN Conference in Rio de Janeiro in 1992, enunciates the idea that, in case of risk of serious or unavoidable damage, the absence of absolute scientific certainty cannot serve as a pretext to postpone the adoption of effective measures regarding the prevention of environmental degradation. However, the debates so far have failed to establish a precise and unique meaning of the principle, which can be interpreted either as an attitude of reasonable prudence, which does not necessarily involve seeking liability, or as a new foundation of liability in uncertain universe [8, p. 2010]. Many times, this principle is confused with the principle of prevention, despite the fact that the latter becomes applicable to certain risks, and the principle of precaution is intended to impose measures from the moment uncertain risks of production are noticed, but which, due to their potentiality and irreversibility, can generate certain damages much more specific in ascertainment, evaluation and repair due to ignorance even in scientific terms [2, p. 141]

***The principle of liability for future damage (positive liability)*** was adapted and applied with the aim of strengthening the legal framework necessary for the process of preventing future

risks, uncertain, but of a plausible potentiality, and more recently, the doctrine tries to base the regime of an applied liability on this principle with anticipation for the damages to be produced in the future [1, p. 13].

***The principle of cost recovery is an emanation of the "polluter pays" principle***, being expressly regulated in the content of the Water Law (art. 54). According to the norm, in order to achieve the objectives of that law, the principle of full recovery of the costs related to the use of water is applied, including the full assessment of the cost of water as a component of the environment and a natural resource, based on an economic analysis of the use of water and in compliance with the "polluter pays" principle".

***The principle of the priority of the purpose of environmental protection in relation to that of satisfying economic interests.***

Recognizing the problem of environmental protection as representing an objective of particularly important national interest, the achievement of which conditions human existence itself, the relationship between the success of economic and social development and the prospects for environmental development was evaluated, thus establishing an indissoluble link between these factors, respectively assigning to the environmental factor a primary and increased importance [23, p. 186].

Regarding the rationales and advantages of integrating legal-financial instruments into environmental policy, we say that every time we bring up the rationale of applying economic instruments to balance the interest between environmental protection and economic development, we must start from the reality in which neither of these intentions want to yield. On the one hand, economic momentum is necessary for the development of a society as a whole, because all other areas of social life depend on this sector (education, health, public security, tourism, creativity, politics, etc.), and on the other hand, the quality of the environment it is also necessary for human existence in a favorable natural space.

The research of the economy-environment relationship begins by showing the category of relationships between these two great conditions of human existence on Earth, of which we have chosen to analyze the following:

**♣ *relationship of perpetual and mutual dependence***

As some authors claim [17, p. 42], the truth is that we are closely linked to ecosystems to sustain us. From the water we drink to the food we eat, from the sea that provides us with its resources, to the land we build our homes on, ecosystems provide vital goods and services. To these, the authors also come with a conclusion that we fully support, namely that "if our life on Earth is impossible without ecosystems, then we must learn to live better within them, according to their operating principles."

**♣ *conflict relationship***

Always dependence on something has also generated a state of conflict at certain points of tension. In fact, the conflict relationship between the principles of economic development and those of the functioning of the environment has always existed, especially since man discovered the pleasure of comfort that could not be ensured without the technical means that he built and adapted to the existential needs of - throughout the time he lived.

**♣ *relationship of subordination before the laws of existence of the environment***

In the fierce battle that has been going on for several decades between economic interests and those of environmental protection, it seems that the latter is currently winning, at least this matter can be deduced from the content of all environmental policies, regulations and ecological control and management.

**♣ *relationship based on the supremacy of priorities that the environment holds for humanity***

Today it is no longer news that any economic activity, prior to its initiation and development, is to be coordinated with the environmental authorities, and they are to verify the correspondence of the degree of influence of any activity on the environment with its capacity

for regeneration and tolerance, to establish a balance between the priorities of economic development and that of nature conservation, a matter valid for all states of the world.

Having said that, we will show the main conclusions drawn in the segment of the concept of regulation and application of economic instruments for environmental protection, in the following order:

- Despite the fact that the environmental doctrine contains a great diversity of works in which the main notions of the environmental protection segment are defined (environment, environmental protection, activity with an impact on the environment, etc.), and on the other hand, the economic, entrepreneurial field defines in detail the notions specific to them (economy, economic activity, entrepreneurship), however, we do not identify notions that would combine both fields. However, this is quite necessary for the matter of researching the economic-financial instruments of environmental protection, the institution that necessarily combines aspects specific to the economic field and that of environmental protection;

- In the specialized literature, both national and international, there is an excess of classification of economic-financial instruments for environmental protection, but we do not identify a systematized classification that would include absolutely all the instruments, classified according to certain specific criteria. Also, at the level of legislation, the Republic of Moldova is very reluctant regarding voluntary economic instruments, those aimed at stimulation, but also those anticipating environmental degradation;

- The Moldovan doctrine does not address distinct principles that would substantiate the field of regulation of the economic-financial instruments for environmental protection, a fact that discourages the understanding of their essence, and as a consequence, their uniform application by the environmental authorities, respectively by those who they do justice;

- At the level of learning, promotion and interpretation, legal-financial instruments for environmental protection do not enjoy much approach, neither at a scientific nor at a practical level, which makes them difficult to understand and apply especially by to the subjects responsible for their application who do not have special studies in the field of environmental protection (state tax service, customs service, consumer protection agency, etc.).

***Chapter 3, with the generic "Anticipatory economic-financial instruments for environmental protection"***, sheds light on the analysis of the instruments intended to anticipate the negative effects on the environment produced within the economic activity. Also, the given compartment contains the analysis of the economic-financial instruments for involving the producer-consumer relationship in reducing negative influences on the environment, but also those for stimulating the initiative of the economic agent to resort to methods and technologies harmless to the environment.

In environmental matters, it has become an axiom that, the most effective tool of prevention, given that, by their nature, environmental components, once they have been destroyed, can no longer be brought back to their original state before degradation. Following the same idea, we will proceed in the plan of approaching the legal-financial instruments for the protection of the environment applicable to economic agents on the occasion of the production, processing and commercialization of products, as well as the provision of services of any kind, with potential negative impact on the environment.

From the category of economic-financial instruments that have the ability to prevent the negative impact of economic activity on the environment, the following were analyzed:

- coordinating and collecting fees in advance for carrying out activities with an environmental impact;

- internalization of environmental protection costs in the amount of prices;

- supporting the costs for carrying out self-protection measures against negative effects on the environment;

- financial guarantees intended for the protection of the environment through improvement, in the category of which they belong:

1. Environmental funds

2. Financial guarantees for environmental protection offered in case of insolvency

So, for the formulation of a consistent legal framework in the mission of environmental protection through the involvement of the consumer, as a first solution, according to us, quite effective and promising, would be the more accentuated greening of the Law on consumer protection, metaphorically speaking, "pressuring" through it certain environmental protection obligations for the consumer.

Obviously, at first glance, apart from the obligation to select and evacuate waste separately, by category, or use equipment and other personal goods in strict accordance with the manufacturer's prescriptions, the question would arise, how will we pursue the execution of other obligations to the consumer and what will be the penalties for non-compliance? However, it remains at the discretion of the consumer to choose whether to throw the defective equipment, bottles or other containers, including plastic mass, in the dumpster or take them to the collection point, or even directly to the recycling plant in exchange for a sum of money.

So, it is about a mutual co-interest of both the producer and the consumer in complying with the conditions of environmental protection during the use of household technology, automobiles, goods for individual use through indirect obligation, by conditioning the obtaining of advantages from the producer. Obviously, in order for this to become possible, it is also necessary to make the relationship between producer and consumer more flexible by indicating in the product instruction the contact data, for online communication with any producer from any point of the globe; obliging the manufacturer to establish branches in all the countries where they export products, this would also exclude the trader's intervention in the circuit of products and services, a tendency increasingly manifested at the level of the European Union.

We recall, on this occasion, the latest EU Strategy presented on May 20, 2020 by the European Commission, with the generic: "From farm to consumer", which constitutes one of the key actions within the European Green Pact. Contributing to the goal of achieving climate neutrality by 2050, the strategy envisages the evolution of the current EU food system towards a sustainable model [15]. The Farm to Fork strategy also aims to contribute to a circular economy. This will aim to reduce the environmental impact of the food processing and retail sectors by taking action on the transport, storage, packaging and production of food waste [18].

Another solution to the problem raised would be that, through the national legislation in the field of consumer protection, obviously connected to the international one that would oblige all the producers of the states that ratify it, to impose on the producer the obligation to communicate the useful information to the consumer to make it possible to repair the good in domestic conditions, even without having knowledge in the field or would indicate the parts, parts of other manufacturers with which his good is compatible. Thus, the obligations of the two actors on the market of potentially dangerous products for the environment must condition each other, involving them in a circle of mutual actions and consequences in which the environmental factors would benefit, as a result of reducing the amount of waste. This being a better solution even than recycling, because the latter imposes expenses, additional efforts on the part of the consumer and the one who recycles them, moreover, their storage and processing also generate negative effects on the environment.

A third solution to the problem of involving the producer-consumer relationship in their joint mission of environmental protection, especially the consumer, a legal entity under public law, would be to promote interest in green (ecological) public procurement, also called sustainable procurement; socially responsible procurement or more preferable environmental procurement.

Indeed, the public procurement system would also be an important tool for environmental protection through which it becomes possible to compel, in one way or another, the public authorities, on the one hand, to give priority to more ecological goods and services, and, on the other hand, the determination of economic operators to offer ecological goods and services. However, when a public authority is to procure goods and services with public money, it is

forced to operate within the limits of the special law [13], and thereby the priority of purchasing ecological products is also imposed.

In fact, at the international level, the policy of green procurement has long been promoted, especially in OECD member countries (Japan, Canada, Australia, South Korea) as well as in developing countries (Thailand, Philippines and others). Also at the global level, green public procurement is explicitly mentioned in the Implementation Plan of the Johannesburg Summit which encourages public authorities at all levels to consider aspects of sustainable development in the decision-making process and to promote public procurement policies that stimulate development and offer of environmentally friendly goods and services [4, p. 154].

Among other things, our legislation in the field of public procurement promotes among the principles of awarding the procurement contract, the principle of environmental protection. However, according to art. 72 lit. c) from Law 131/2015, the public procurement contract is awarded based on the following principles: ensuring environmental protection and supporting social programs in the contract execution process.

Well, this rule expressly refers to the principle of the execution of the contract which, naturally, must be in accordance with the rules of environmental protection, but it would also be required that the priority of environmental protection be given also in the tender selection stage, considering - the offer that offers more ecological goods and services should be the most advantageous.

In this context, for an even more pronounced greening of the legislation in the matter of public procurement, we recommend the completion of letter b) from art. 72 of Law no. 131/2015 in the following wording:

b) selection of the most advantageous offer, including from the point of view of environmental protection;

#### **Consignment system**

In fact, this system has been operating for a long time, only it has been limited to glass packaging only, and in legal doctrine it is known as the "consignment system", originating from the consignment trade. Currently, it has been extended, in some states, to plastic bottles as well, in Germany already being provided for a wide range of packaging (beverage boxes, detergents, paints and varnishes, etc.) [8, p. 215]. Also, that system, also known as the deposit system, is applied in a more extensive form in many countries. For example, in Finland the deposit system is applied for car bodies, in Austria for light bulbs, in the USA for tires, and the effectiveness rate of this system is 60% in Austria and between 85 and 95% in Norway.

Therefore, because the policy of environmental costs internalized in the price of the product mainly targets the packaging, we would propose that when forming the prices of the products, a higher price of the packaging should be included according to its degree of impact on the environment to be returned to the consumer, when returning packaging of any kind (primary, secondary, tertiary or reusable). Therefore, the legislation in the field of packaging and packaging waste should also provide more details for reusable packaging returned under the deposit system provided for in art. 5 point 19) of Regulation [10] by increasing the cost of packaging, in the sense that it is more expensive to be paid by the manufacturer/seller than by the waste collector.

**Chapter 4, entitled "Economic-financial control instruments in the field of compliance with environmental protection standards"**, contains details about the financial instruments for monitoring the production process; the economic-financial instruments of voluntary involvement of entrepreneurs in activities to control negative influences on the environment, subjects with special competences in the exercise of financial control over the use of resources intended for environmental protection, as well as analyze the possibility of applying new economic-financial actions applicable to entities for violation of the environmental protection regime.

Considering that the main and most aggressive source of pollution is considered to be the economic activity, and especially that in the area of production and processing of products of any category, we believe that precisely in this phase the control in terms of compliance with the

norms would be effective environmental protection. Because we are talking about economic activity, the specifics of the control would also be of an economic-financial nature. In other words, it should be achieved by monitoring the financial flows caused by the investments in the volume of production by balancing them with the investments in the technology that would ensure the reduction of the impact on the environment.

The concept of the production process can be defined as the totality of the conscious actions of the employees of an enterprise, directed with the help of various machines, machines or installations on raw materials, materials or other components in order to transform them into products, works or services with a certain market value [6].

The respective formula of the production process is not a novelty for environmental science, but rather a phenomenon that will never be banned, but can be controlled and adapted to the requirements imposed in terms of environmental protection. So, don't think that through the control tools of the production process, you insist on stopping some activities or reducing the amount of products, but rather, you insist on obtaining a purer production, respectively through a purer process and with more few negative environmental consequences.

In this regard, the recent doctrine discusses the ways to obtain a purer production, and these being considered ways of eco-efficiency or sustainable production, the newest environmental protection strategies against pollution from industrial sources [3, p. 21 ].

Accordingly, these new protection tools are based on new principles other than those of pollution control, including the "end-of-pipe" principle. However, we do not exclude a financial control of the industrial production cycle, where the costs are borne by the producer for replacing the exhaustible raw material with the renewable one. This is precisely the idea of the economic-financial instruments for controlling the production process. As it is also stated in the specialized literature, sustainable production is closer and could even include in its concept the application of economic tools for the continuous reduction of the exploitation of natural and exhaustible resources [4, p. 149].

Following this consecutive approach, we consider that by exercising the financial control of the enterprise it is also possible to control the degree of environmental protection on the part of the economic operator. Namely, this would be possible by introducing in the accounting balance, in a separate compartment, the data on the costs related to environmental protection. Thus, we come to the position of an accounting of the financial measures for environmental protection, by integrating into the accounting system and the accounts that will reflect the expenses incurred on the occasion of the prevention of pollution, the reduction of emissions with a greenhouse effect, the modernization of the waste collection system, etc., and at assets compartment, the subsidies received for the financing of environmental protection measures, tax exemptions, even the rate of interest reduction for preferential (green) loans granted by banks, etc. will be reflected.

As it is also supported in Romanian specialized doctrine, the system of accounting accounts must be adjusted in order to incorporate the environmental component, environmental protection expenses and those related to the assessment of environmental damage, natural capital stocks, as well as all the expenses of environment [17, p. 177].

The concept of voluntary instruments to control negative environmental influences.

A few decades ago, the field of environmental protection noticed the need to concentrate some categories of measures aimed, in particular, at economic operators in environmental management standards applicable within enterprises, recognized by the abbreviation-OIS.

Obviously, the implementation and control of their compliance has always been a complicated process, but it was worth the effort, today they are recognized as the most effective environmental protection tools at the corporate level. Or, as it is also stated in the specialized literature [12, p. 300], the practice of the last two decades has demonstrated that the most requested and effective way to ensure environmental protection, especially at the corporate level, is the creation and implementation an environmental management system (EMS) as part of the general management of the company/enterprise. Agreeing with that approach, the author Arcadie

Capcea concretizes that SMM is the tool that ensures, within the entire complex of activities of an enterprise, the promotion in accordance with its interests of solutions for environmental problems through:

- identification of ecological problems, including those related to the use of natural resources;
- distribution of materials of all types in the interest of environmental solutions;
- distribution of responsibilities;
- continuous assessment of the environmental progress of applied processes, actions and practices [4, p. 138]

Product Lifecycle Tracking. Being known in specialized literature as product life cycle assessment (ECV), but also as a standard of the environmental management system (IOS14040), it is considered by us as an environmental protection tool with financial implications, provided that its use has direct influences on production costs, tracking and control of the end-of-life process of a product.

Voluntary environmental control agreements. As we mentioned in the previous section, another problem that reflects the complexity of the application of environmental standards is that of the exercise of control by the authorities, in the conditions in which it requires the involvement of personnel with control attributions, and with this also financial resources.

Thus, an ingenious tactic that would exclude the direct intervention of the authorities in the exercise of control over compliance with environmental standards within the management of the enterprise, but also in determining economic operators to adopt measures to reduce the impact of their activity on the environment, refers to the establishment of certain financial facilities to those who voluntarily report an ecological efficiency and a reduction in the degree of pollution. In this way, the voluntary ecological agreements concluded between economic operators and environmental authorities appear, which, on the one hand, lead them to implement the best environmental protection tools themselves, and on the other hand, make them beneficiaries of financial resources from the state in the form of incentives, environmental tax exemptions, preferential credits, promotion of ecological products, etc.

So, speaking about the sanction, we say that in environmental matters they must be predominantly of an economic-financial nature, especially those applicable to economic operators. However, the penalty must be established in such a way as to lead to the achievement of the purpose of its application, and in the case of economic agents, purely financial sanctions will not ensure the achievement of the purpose, because the financial losses caused by the application of fines will be, in the end, also at the expense of the consumer by including them in the price of the product, for example. Therefore, we are thinking about some sanctions of an economic nature that would affect them more, among which we would propose the following sanctions: sanctions imposed through the economic activity authorization system; sanctions restricting access to the market (including the public procurement market); banning sanctions in accessing funds, loans (through the ban on issuing bonds, for example, etc.).

The research carried out in the last compartment of the doctoral thesis allowed us to understand the following:

1. The national legislative framework in the field of environmental protection does not regulate a concrete mechanism for supervising the production activity, which should be made up of financial instruments capable of preventing the negative impact in the production phase.

2. In the European legislative area, but also in the international doctrine, a trend of deviation from impunity in favor of attracting the economic operator to cooperation with the environmental authorities in the segment of voluntary reporting of the impact on the environment can be felt lately, but also of the implementation of pollution reduction measures in exchange for the benefit of certain economic, financial and fiscal facilities. The joint measures of the economic operators and the environmental authorities are provided in the content of the environmental agreements, and the pollution control costs are borne by the economic agents owning the sources of pollution.

3. The national legislation in the field of managing the Environmental Protection Fund, although it regulates the structure and powers of a body responsible for management, does not designate the subjects that would be concerned, in particular, with the supervision of the use of the financial resources accumulated and financed by the Fund.

## **GENERAL CONCLUSIONS AND RECOMMENDATIONS**

The study carried out in the process of developing this doctoral thesis allows us to understand the current level of regulation and research of the economic-financial instruments for environmental protection, the problems of the field that the legislator faces in regulation, the specialty of the technique of applying the existing norms in the matter, but and the prospects that can be achieved through a systemic, multidimensional and innovative approach of various economic and financial instruments. Also, within the present study, we were able to draw the following general conclusions:

1. Since the independence of the Republic of Moldova, especially since 1993, when Law no. 1515/1993 and until 2010, the field of environmental protection through economic-financial instruments has a superficial approach, especially in the promotion of an environmentally friendly economic policy. Even after this period, the economic instruments for environmental protection against the negative impact from economic activities remain insignificant, being limited only to environmental taxes for the use of natural resources, pollution taxes and fines for non-compliance with legislation in the field. The situation changes radically with the adoption of the Environmental Strategy for the years 2014-2023, a policy document that emphasizes the set of economic-financial instruments for environmental protection against the negative effects coming from the direction of industrial and, in general, entrepreneurial activities;

2. The scientific field that addresses, at the national level, the issue of financial instruments for environmental protection is an underdeveloped one, with very few scientific works that only tangentially deal with the problem under discussion, and the spectrum of works with a narrower research area (scientific articles, materials of conferences, monographic works), which exclusively address the issue of economic-financial instruments for environmental protection, are completely missing. Diametrically opposite, the international legal-doctrinal framework persistently researches and promotes the field of environmental protection through financial instruments, knowing a long period of their regulation and application. Moreover, the developed countries of Europe, Asia and North America collaborate and compete even in the segment of consecrating new economic instruments for environmental protection, promote a policy of stimulating the intention of economic agents to resort to production, marketing and service provision through methods environmentally friendly.

3. The national environmental doctrine does not discuss a separate concept of economic-financial instruments for environmental protection, and on the other hand, neither the economic field, in particular, the entrepreneurial one, does not strive to establish a compartment that would be concerned with identifying and promoting an economic policy based on the priority of reducing the impact on the environment. However, this is quite necessary for the research of the economic-financial instruments for environmental protection, the institution that necessarily combines specific aspects of the economic field and that of environmental protection.

4. Cognitively, the legal-financial instruments for environmental protection do not enjoy much interpretation or polemics on their side, neither at a scientific nor at a practical level, which makes them difficult to understand and apply, especially by the subjects responsible for their application who do not have special studies in the field of environmental protection (state tax service, customs service, consumer protection agency, etc.). That is why, currently, there is an acute need to train the specialists vested with the right to apply them, and for the academic environment, to interpret their meaning and the rationale of the legislator, when he resorted to regulation;

5. At the level of transposition and application, a large part of the economic-financial instruments for environmental protection (green purchases, financial instruments applicable in case of insolvency, green bonds) are not provided for by our legislation, moreover, they are not found in the content of the current Environmental Strategies. Also, the competent authorities in the field of environmental protection do not apply the new financial instruments for environmental protection, regulated in the content of the environmental legislation after the years 2017-2020, limiting themselves to the instruments provided in the content of the Law on payment for pollution from 1998.

6. The national legislative framework in the field of environmental protection does not regulate a concrete mechanism for supervising the production activity, which consists of economic-financial instruments capable of preventing the negative impact in the production phase. The same situation can be seen with regard to other economic control tools, such as: tracking the product's life cycle; the extended producer responsibility mechanism; environmental agreements.

7. In the European legislative space, but also in the international doctrine, a trend of deviating from impunity in favor of attracting the economic operator to cooperation with the environmental authorities in the segment of voluntary reporting of the impact on the environment, but also of the implementation of pollution reduction measures in exchange for the benefit of certain economic, financial and fiscal facilities.

The finality of the conducted study, which materializes in the broad spectrum of the identified conclusions, is also presented through the series of the following recommendations:

***At the theoretical level***

1. Defining the notion of "environmental protection" as a set of regulated activities that consist in ensuring the rational use, development and conservation of environmental factors through various instruments with a preventive impact (economic, financial, fiscal, administrative, managerial, voluntary, etc.).

2. By economic activity we must understand that main component of human activity that arises from the need to cover existential needs and that consists of any kind of activity (production, processing, marketing or the provision of any type of service), whether it is or not profitable.

3. Definition of the legal-financial instruments for environmental protection in the sense of financial incentive or coercion measures, regulated in order to impose them on subjects carrying out economic activities with a negative impact on the environment, aiming at the anticipated accumulation of financial resources, intended the remediation of environmental components that are inevitably at risk of being affected.

4. The environmental fund is an extra-budgetary economic-financial instrument, made up of the private contributions of polluters, natural or legal persons, intended to finance the activities of prevention, protection and restoration of the state of the environment.

5. The new concept of classification of economic-financial instruments is to regroup all instruments according to a different logic and consecutiveness, namely, in:

♣ 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;
- 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;
- authorization of activities with impact through the permit and license system.
- ♣ Economic-financial instruments for involving the producer-consumer relationship in the common mission of environmental protection:
  - ecodesign;
  - ecological labeling;
  - ecomarketing;
  - the packaging return system.
- ♣ Economic-financial instruments to stimulate the initiative of the economic agent to resort to methods and technologies harmless to the environment:
  - the subsidies;
  - preferential loans;
  - green bonds;
- ♣ Economic-financial control instruments in the field of compliance with environmental protection standards:
  - tracking the life cycle of the product;
  - integrated pollution control;
  - supervision of the production process;
  - the reporting of economic entities about the performances in the field of environmental protection;
  - ecological agreements to reduce the impact of economic activity on the environment.

***At the legislative level, we propose:***

1. Modification of the text of the norm from art. 34 para. (3) from Law no. LP98/2022 regarding atmospheric air quality in the following wording: for means of transport, the pollution tax is applied depending on the degree of performance in reducing the emissions generated, being charged at the time of the first registration, respectively at the beginning of each calendar year of operation, in accordance with the provisions of Law no. 1540/1998 regarding payment for environmental pollution.

2. In order to support the idea of advance payment of the possible costs of restoring environmental components by those who obtain the right to discharge waste water, store waste, emit pollutants of any kind into the atmosphere, we suggest to the legislator the amendment of the rules from art. 10 para. (3), art. 14 para. (3) and (4) of Law no. 1540 regarding the payment for environmental pollution in the sense of the advance collection of payments for environmental pollution;

3. Completion of art. 11 paragraph 6 of Law no. 1540 regarding payment for environmental pollution, with letter f1 with the following text: the packaging related to ecological products.

4. Completion of Law LP98/2022 on atmospheric air quality with a new article, 341 (Facilitation of economic operators who use high-performance technologies to reduce emissions in the atmosphere) which will have the following content: To operators who use in the process of economic activity high-performance technologies intended to reduce from the aggressiveness of emissions into the atmosphere, they are granted fiscal facilities depending on the capacity and number of installed purification units.

5. Completion of art. 84 of Law no. 1515/1993 with the list of sources from which the National Environmental Fund will be formed, as follows:

- payments for environmental pollution;
- fines for violating environmental protection legislation;
- means obtained from the repair of damages caused to the environment;
- from the sale of the confiscated production that was obtained through the illicit exploitation of flora and fauna;
- a share of the revenues obtained from the collection and export of scrap metal;

- a share of tobacco sales;
- a share of the sale of wood;
- from donations, sponsorships, grants;
- part of the income obtained from the organization of various events in the field of environmental protection;
- from the interests obtained following the granting of credits from the account of the Environmental Fund, etc.

6. The return to the text of art. 14 paragraph (3) letter i) in the version of Law no. 231/2010 until 2020, where it is stipulated that the Notification regarding the initiation of trade activity will contain the following data: lit. i) data on the waste transport contract, countersigned in the manner established by the local public administration authority.

7. The completion of paragraph 3 of art. 121 of Law no. 231/2010 [94] with the following text: Home producers can sell the products mentioned in para. (2) in markets, locations, as well as directly from one's own household (the lot next to the house in the urban area of the locality (household), the lot/lots for vegetable cultivation or the lot/lots from the orchards). For the issuance of the household consumer declaration, the applicant must present a copy of the valid sanitation contract concluded for the entire period for which the act is requested;

8. Completion of art. 181 of the Criminal Code in the following wording: Violation of the rules for ensuring, in the manner established by the local public administration authority, cleanliness in urban and rural localities, as well as the avoidance of contracting for the evacuation of waste from domestic activities.

9. Completion of art. 43 of Law no. 149/2012 [96] with a new paragraph (21) which will have the following content: claims arising from environmental damage.

10. In order to set up financial guarantees intended for the restoration of environmental components, for capital companies (SRL and SA), whose type of activity is the exploitation of natural resources, the legislation in the field of their establishment [109] could impose certain limits minimum share capital, making it possible to guarantee the repair of damages caused by them, in particular, in cases of insolvency.

11. Completion of the rule from letter c), para. (2), art. 30 of the Forestry Code in the following version: the forestry beneficiaries have the obligation to clean the parquets of exploitation debris, and the lands damaged in the exploitation process to be brought to a good condition for use according to the destination. Failure to fulfill this obligation entitles the central forestry authority to undertake measures to restore the components put into use, from the account of the amount previously deposited by the beneficiary in the form of a bond.

12. Expansion of the regulatory area of Law no. 115 of 09.06.2005 regarding the ecological agri-food production in question on all products, not only the agri-food ones, giving the national brand the status of an ecological brand with the inscription "organic product", acquiring the role of an economic-legal instrument for environmental protection and the consumer against impact products.

13. The completion of letter b) from art. 72 of Law no. 131/2015 on public procurement in the following wording:

b) selecting the most advantageous offer, including from the point of view of environmental protection.

14. Legislation in the field of packaging and packaging waste should also provide more details for reusable packaging returned under the deposit system provided for in art. 5 point 19 of the Regulation on packaging and packaging waste [79] by increasing the cost of packaging, in the sense that it is more expensive to be paid by the manufacturer/seller than by the waste collector.

15. Exclusion of section 6 of the Regulation on the evaluation of state aid for the protection of the environment.

16. Exclusion of point 5) from the Regulation on the evaluation of state aid for the protection of the environment.

17. The integration into the accounting system and the accounts that will reflect the expenses incurred for the prevention of pollution, the reduction of greenhouse emissions, the modernization of the waste collection system, etc., and in the assets section, the subsidies received for the financing of protection measures will be reflected of the environment, tax exemptions, even the interest reduction rate for preferential (green) loans granted by banks, etc.

18. Regulation in a separate chapter of Law no. 1515/1993 regulating, as a general framework, the management of GHG quotas, emission monitoring, reporting and verification of the degree of emission from enterprises, and in particular, to describe the entire mechanism of calculation, contracting and transfer of these rights in the content a Regulation or Instructions approved by Government Decision or by the central body in the field of environmental protection (Ministry of the Environment).

19. Inclusion in Appendices no. 1 and 2 of Law no. 160/2011 [106] of a note with the following text: The economic operator who, upon repeated request for the permissive act, demonstrates performance in the field of environmental protection by reporting concrete results in reducing the impact from the previously authorized activity, benefits from a tax reduction in the amount of 10% of its cost.

20. The inclusion in the Regulation on the administration of the National Ecological Fund of a new chapter (IV) establishing the structure and powers of the control body for the administration of the financial sources of the NEF, which would be the following:

- exercises control over the accumulation of financial resources and their use according to destination, according to the annual budget and established conditions;
- examines and takes decisions regarding the violation by the responsible factors of the manner and conditions of use of the financial sources allocated from the FEN;
- examines and approves reports on the formation and use of FEN means;
- ensures the transparency of activities related to the management of ecological funds;
- detects contraventions and applies sanctions provided by the Contravention Code.

21. The adoption by law of some sanctions of an economic nature that would affect them more, among which we would propose the following sanctions: sanctions imposed through the economic activity authorization system; sanctions restricting access to the market (including the public procurement market); banning sanctions in accessing funds, loans (through the ban on issuing bonds, for example, etc.)

22. Completion of art. 24 of Law no. 131/2015 regarding public procurement with a new paragraph (3) in the following wording: if the economic operator will not present any certificate demonstrating compliance with environmental standards or confirming the provision of an appropriate level of environmental protection, he is to be excluded from the competition in the procurement procedure in which he participates.

23. Inclusion of a new article (art. 171) in the content of Law no. 1134/1997 [97] with the following name: Restriction of the right to issue bonds, in the following wording: Joint-stock companies that do not comply with environmental protection standards and they do not undertake measures to reduce the impact on the environment resulting from the activities carried out, they cannot issue bonds.

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## ADNOTARE

### ȚERUȘ Ivan. Instrumente juridico-financiare de protecție a mediului în cadrul activității economice.

Teză de doctor în drept. Chișinău, 2023

**Structura tezei:** Introducere, patru capitole, Concluzii generale și recomandări, Bibliografia din 195 titluri, 147 pagini text de bază. Rezultatele obținute sunt publicate în 8 lucrări științifice.

**Cuvinte-cheie:** mediu, poluare, impact asupra mediului, protecția mediului, răspundere de mediu, politici de mediu, instrumente economico-financiare, activitate economică, control financiar, circuit economic, deșeuri, reciclare, produse și servicii cu impact.

**Scopul și obiectivele lucrării** vizează identificarea problematicii instrumentelor economico-financiare de protecție a mediului, precum și a soluțiilor privitoare la completarea categoriilor de instrumente existente, dar și a îmbunătățirii cadrului juridic de aplicare a lor. Întru atingerea scopului preconizat, au fost trasate următoarele **obiective ale cercetării:** evaluarea gradului de abordare științifică a instrumentelor juridico-financiare de protecție a mediului în cadrul activității economice la nivel național și internațional; analiza conceptelor actuale ce stau la baza instrumentelor juridico-financiare de protecție a mediului consacrate de legislația Republicii Moldova, identificarea problemelor ce determină ineficacitatea lor, precum și argumentarea rațiunilor și avantajelor ce determină reconsiderarea acestora în contextul inevitabilității progresului economic; elucidarea specificului principiilor care fundamentează ideea suportării costurilor, interdicțiilor și măsurilor de siguranță cu caracter financiar de către operatorul economic în favoarea protecției mediului, dar și a altor instrumente noi propuse; identificarea unor instrumente juridico-financiare destinate anticipării efectelor negative asupra mediului, care, în același timp, să devină funcționale și raționale în contextul regulilor de desfășurare a activității economice în Republica Moldova; formularea mecanismelor de aplicare combinată a măsurilor financiar-fiscale în domeniul protecției mediului.

**Noutatea și originalitatea științifică.** Elementul de noutate științifică se identifică prin șirul sugestiilor inovatoare oferite, atât la nivel teoretic, cât și cel legislativ. În plan teoretic au fost formulate un șir de noțiuni ale domeniului cercetat după un concept propriu, ce exprimă noi viziuni de definire, iar în plan de reglementare, noutatea științifică este reflectată de șirul propunerilor de modificare și completare a unor acte normative.

**Semnificația teoretică** este confirmată prin noile concepte de formulare și sistematizare a instrumentelor economico-financiare de protecție a mediului; constituirea bazei teoretice de fundamentare și afirmare a unui nou domeniu de studiu și cercetare, cum ar fi cel al economiei mediului; dezvoltarea bazei științifice naționale în materia cercetării instrumentelor financiare de protecție a mediului.

**Valoarea aplicativă a tezei** consistă în faptul posibilității de ghidare a legiuitorului în procesul de elaborare a legislației în domeniul protecției mediului, dar și al racordării legilor existente la cadrul juridic internațional. De asemenea, rezultatul studiului va fi de mare utilitate autorităților de mediu în aplicarea legislației și a sancțiunilor față de operatorii economici care nu respectă standardele și măsurile de reducere a impactului activității economice asupra mediului.

**Implementarea rezultatelor științifice.** Absolut toate ideile, ipotezele și soluțiile oferite de prezenta lucrare pot fi preluate în cadrul realizării activităților didactice, precum și cele cu caracter științific, la elaborarea lucrărilor de licență și masterat, de instruire a personalului din cadrul autorităților publice ale Ministerului, în materia aplicării instrumentelor economico-financiare de protecție a mediului.

## АННОТАЦИЯ

**ЦЕРУШ Иван. Правовые и финансовые инструменты охраны окружающей среды в рамках экономической деятельности.**

**Докторская диссертация в области права. Кишинэу, 2023 г**

**Структура диссертации:** Введение, 4 главы, общие выводы и рекомендации, библиография из 195 разделов, 147 страниц основного текста. Полученные результаты опубликованы в 8 научных работах.

**Ключевые понятия:** окружающая среда, загрязнение, воздействие на окружающую среду, охрана окружающей среды, экологическая ответственность, экологическая политика окружающей среды, финансово-экономические инструменты, экономическая деятельность, финансовый контроль, хозяйственный оборот, отходы, переработка.

**Цель и задачи работы:** нацелена на выявление проблем экономико-финансовых инструментов охраны окружающей среды, а также решений, касающихся дополнения категорий существующих инструментов, но и совершенствования правовой базы их применения. Для достижения намеченной цели, были сформулированы следующие **задачи исследования:** оценка степени научного подхода к правовым и финансовым инструментам охраны окружающей среды в рамках экономической деятельности на национальном и международном уровне; анализ современных концепций, лежащих в основе правовых и финансовых инструментов охраны окружающей среды, установленных законодательством Республики Молдова выявление проблем, обуславливающих их неэффективность, а также обоснование причин и преимуществ, определяющих их пересмотр в контексте неизбежности экономического прогресса; освещение специфики принципов, лежащих в основе идеи несения затрат, запретов и мер безопасности финансового характера экономическим оператором в пользу охраны окружающей среды, а также других новых предлагаемых инструментов; определение некоторых финансово-правовых инструментов, предназначенных для предотвращения негативного воздействия на окружающую среду.

**Научная новизна и оригинальность.** Элемент научной новизны определяется рядом инновационных предложений, предлагаемых как на теоретическом, так и на законодательном уровне. На теоретическом уровне ряд понятий исследуемой области был сформулирован в соответствии с собственной концепцией, выражающей новые взгляды на определения, а на нормативном уровне научная новизна отражается рядом предложений по изменению и дополнению некоторых нормативных актов. действует.

**Теоретическая значимость** характеризуется новыми концепциями формирования и систематизации экономико-финансовых инструментов охраны окружающей среды; создание теоретической основы для обоснования и утверждения новой области изучения и исследований, такой как экономика окружающей среды; развитие национальной научной базы в области исследования финансовых инструментов охраны окружающей среды.

**Прикладная ценность диссертации** состоит в возможности руководства законодательного органа в процессе разработки законодательства в области охраны окружающей среды, а также включения действующего законодательства в международно-правовую базу. Также результат исследования будет полезен природоохранным органам при применении законодательства и санкций в отношении экономических операторов, не соблюдающих стандарты и меры по снижению воздействия экономической деятельности на окружающую среду.

**Внедрение научных результатов.** Абсолютно все идеи, гипотезы и решения, предложенные в данной работе, могут быть заимствованы в рамках педагогической деятельности, а также научного характера, при подготовке курсовых работ и магистерских диссертаций, при подготовке кадров в органах государственной власти Министерства, в вопросах применения финансово-экономических инструментов охраны окружающей среды.

## ANNOTATION

### **TERUȘ Ivan. Legal-financial instruments for environmental protection in economic activity.**

**PhD thesis. Chisinau, 2023**

**Thesis structure:** Introduction, four chapters, Conclusions and general recommendations, Bibliography 195 titles 147 pages of basic text. The results are published in 8 scientific papers.

**Keywords:** environment, pollution, environmental impact, environmental protection, liability environmental policies, economic-financial instruments, economic activity, control economic circuit, waste, recycling, products and services with impact.

**The purpose and objectives of the works** are to identify the issue of economic and financial instruments for environmental protection, as well as solutions to complement existing categories of instruments but also to improve the legal framework for their application. In order to achieve the intended purpose, the following **research objectives** were drawn: assessing the degree of scientific approach to legal-financial instruments for environmental protection in economic activity at national and international level: analysis of current concepts underlying legal-financial instruments for environmental protection enshrined in the legislation of the Republic of Moldova identifying the problems that determine their inefficiency as well as arguing the reasons and advantages that determine their reconsideration in the context of the inevitability of economic progress: elucidation of the specific principles that support the idea of economic operators bearing costs, prohibitions, and financial security measures in favor of environmental protection, as well as other proposed new instruments. Identification of legal-financial instruments intended to anticipate negative effects on the environment, which at the same time become functional and rational in the context of the rules for carrying out economic activity in the Republic of Moldova; formulation of mechanisms for the combined application of financial-fiscal measures in the field of environmental protection;

**Scientific novelty and originality.** The element of scientific novelty is identified by the series of innovative suggestions offered, both at the theoretical and the legislative level. On a theoretical level, a series of notions of the researched field were formulated according to an own concept, which expresses new visions of definition, and on a regulatory level, the scientific novelty is reflected by the series of proposals to modify and supplement some normative acts.

**The theoretical significance** is customized by the new concepts of formulation and systematization of the economic-financial instruments for environmental protection, establishing the theoretical basis for substantiating and affirming a new field of study and research such as the environment economy: developing the national scientific basis for research into environmental protection financial instruments.

**The applicative value of the thesis** consists in the fact of the possibility of guiding the legislator in the process of elaborating the legislation in the field of environmental protection, but also of connecting the existing laws to the international legal framework. Also, the result of the study will be of great use to environmental authorities in enforcing legislation and sanctions against economic operators who do not comply with standards and measures to reduce the impact of economic activity on the environment.

**Implementation of scientific results.** Absolutely all the ideas, hypotheses and solutions offered by this paper can be taken over in the performance of teaching activities, as well as those of a scientific nature, in the elaboration of bachelor's and master's works, training of staff within the public authorities of the Ministry in the application of economic and financial instruments for environmental protection.

**TERUS Ivan**

**LEGAL-FINANCIAL TOOLS FOR ENVIRONMENTAL PROTECTION  
WITHIN ECONOMIC ACTIVITY**

**Specialty: 552.04 - Land and environmental law  
Summary of the Doctor of Law thesis**

**Approved for printing: 2.02.2024 Paper size 60x84 1/16  
Offset paper. Laser print Circulation 50 ex.  
Author's papers: 1 c.a. Order no. 58**

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**Printing house of the "Ștefan cel Mare" Academy of MAI MD-2009, Chisinau,  
str. Gh. Asachi, no. 21, phone: (+37322) 723-792, fax: (+37322) 738994,  
web: [www.academy.police.md](http://www.academy.police.md); e-mail: [academy@police.md](mailto:academy@police.md)**