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Fundația Soros Moldova

STUDY

ASSESSMENT

ON THE CURRENT SITUATION

on environmental crimes investigation

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LIST OF ABBREVIATIONS

EA	Environmental Agency
LPA	Local public administration
IEP	Inspectorate for Environmental Protection
GD	Government Decision
OPG	Office of the Prosecutor General
RER	Real Estate Register
RM CC	Criminal Code of the Republic of Moldova
RM CvC	Contravention Code of the Republic of Moldova
c.u.	Conventional unit
CDW	Construction and demolition waste

INTRODUCTION

The Constitution of the Republic of Moldova stipulates in Article 37(1) that every individual has the right to live in an ecologically safe and healthy environment, to consume healthy food and to use harmless household appliances.

The rational use of natural resources is regulated by the Constitution of the Republic of Moldova, Law on Environmental Protection 1515/1993 (hereinafter referred to as Law 1515/1993) and other regulatory documents, which lay down specific rules on the rights and obligations of citizens in relation to the environment and natural resources.

Elements of the environment regulated by the environmental legislation include the following natural resources: soil, subsoil, water, flora, and fauna, as well as air, which, according to Article 4(1) of Law 1515/1993, constitute the national property of the Republic of Moldova.

According to Article 89 of Law 1515/1993, violation of legal norms regulating social relations regarding the rational use of natural resources and environmental protection entails civil, contravention or criminal liability, and individuals and legal entities have the obligation to compensate the damages and losses caused by the violation of environmental legislation.

Criminal liability for violating the environmental legislation arises when the illegal act or omission harms social values protected by law, and the degree of social danger resulting from these violations affects elements of environment, the health of the population or other serious consequences.

Environmental crimes are harmful acts, regulated by criminal law, which affect the social relations in terms of rational use of natural resources, environmental discipline and population safety, consisting of direct, illegal use of natural objects as social values, acts that lead to negative changes in the state and quality of the environment.[1]

The social danger of environmental crimes is not only limited to specific harmful consequences, environmental and economic damages caused, but also includes damages to human health. The social danger of these crimes also consists in the violation of the society's environmental interests, in particular violation of everyone's right to a healthy environment, damages to health, property and nature, weaker compliance with environmental protection law, lower level of public security and environmental discipline.

Detecting and investigating environmental crimes is a key factor in preventing such crimes, holding perpetrators accountable, and ensuring the right to a healthy environment for people and for future generations.

This Study aims to describe and assess the current situation regarding detection and investigation of environmental crimes and to identify the obstacles/challenges encountered by official examiners and prosecutors when investigating such crimes and compensating the damage to the environment and to individuals.

This paper is intended to highlight the negative effects on environment and human health that could result from wastewater discharges, illegal logging within the forest fund and dumping of construction or demolition waste.

The Study was developed as part of "Preventing environmental crimes for a clean environment" project, implemented by PA EcoContact with the financial support of Soros Foundation Moldova and co-financed by Sweden. It is intended for central and local public authorities, representatives of environmental and justice authorities, law enforcement bodies and civil society organizations in order to implement the recommended remedial measures.

1 Criminal law, special part, Volume II, page. 385, http://drept.usm.md/public/files/Dreptpenalspecialf2f52.pdf

The study consists of 3 chapters, analyzing the environmental crimes that pollute the elements of the environment - water, forest fund and green areas and construction waste management, as well as annexes: Roadmap.

The Roadmap aims to identify and establish measures to boost the reform of environmental governance and justice by developing and promoting the relevant regulatory framework in order to improve the mechanisms for investigating environmental crimes, improving the system for collecting, analyzing and storing evidence, establishing the role of law enforcement bodies in ensuring the right to a healthy environment and environmental protection, raising public awareness of the need for environmental protection and compliance with environmental law. **(Annex 1).**

Survey on investigation of environmental crimes: gaps, progress and needs were conducted on a sample of 93 respondents (68 - respondents from the Office of the Prosecutor General (hereafter OPG) and its units, and 25 representatives of the Inspectorate for Environmental Protection (hereafter IEP)). The survey was conducted between November 2021 and December 2021, with the aim of identifying the obstacles and challenges encountered by official examiners and criminal prosecution in investigating environmental crime. The survey outcomes have been consolidated and analyzed in a **Survey Report.**

1. ENVIRONMENTAL CRIMES

1.1. CHARACTERISTICS OF ENVIRONMENTAL CRIMES

According to Article 14(1) of the Criminal Code of the Republic of Moldova (hereinafter RM CC), a crime is a prejudicial act (action or inaction) set forth in criminal law committed with culpability and subject to criminal punishment. The elements of a crime that determine its seriousness are: object, objective side, subject and subjective side.

An environmental crime is a harmful act consisting in polluting the environment (natural or man-made), disrupting the prevention, reduction or removal of pollution, which is likely to endanger the health of humans, animals and plants, or cause great damage to the national economy[2].

For an act to be classified as an environmental crime, it is necessary to describe the elements of these crimes:

- **The legal object**[3] of an environmental crime includes the social relations protected by criminal law with regard to rational use of natural resources, environmental protection, and ensuring environmental discipline and public security.
- **The material object** of these crimes includes the environmental components that make up natural ecosystems, such as wild animals and birds, fish, flora (trees, bushes, berries, etc.), water, air, soil, subsoil in relation to which an illegal act or omission is performed.
- **The objective side** of environmental crimes is usually carried out through acts or omissions that violate the environmental legislation, requirements, rules, regulations on rational use of natural resources and environment protection, occurrence of harmful consequences regulated by criminal law (damages to the environment or people's health) and the causal relationship. The objective side of some environmental crimes, in addition to the characteristics mentioned above, include additional characteristics such as: place where the crime was committed (area of a special calamity, forest fund or natural protected areas, prohibited places); time (prohibited period); manner or method (use of poisonous substances or other means of wildlife mass destruction).
- **The subjective side** of environmental crime is expressed by the intentional or reckless commission of acts/omissions that violate the environmental legislation.
- **The subject** of environmental crimes can be an individual, responsible person who has reached the age of criminal responsibility stated in the criminal law, as well as the legal entity carrying out the entrepreneurial activity may be held criminally liable for any of the environmental crimes. For certain types of crimes, the subject may be: the person responsible for the protection and security of forest vegetation (illegal logging).

Environmental crimes can damage either the environment, or people's health, or agricultural production. Environmental damage (harm) is considered to be the damage that affects all environmental factors, in one form or another, with irreversible effects and consequences that are difficult to determine. Environmental damage includes all harms to the natural and man-made environment that is legally protected. Thus, environmental damage is a core sign of environmental crime. It reflects as pollution of the environment, destruction or degradation of natural objects, unbalance the ecosystems, etc. Consequently, environmental damage is directed against society's interests in a healthy environment, i.e. against human health and the well-being of future generations. Thus, people's health is affected by environmental crimes through deterioration or destruction of the natural environment as a place where people live.[4]

2 https://ibn.idsi.md/sites/default/files/imag_file/Notiunea%20si%20caracterizarea%20generala%20a%20infractiunilor%20ecologice.pdf
3 https://ibn.idsi.md/sites/default/files/imag_file/Notiunea%20si%20caracterizarea%20generala%20a%20infractiunilor%20ecologice.pdf
4 https://ibn.idsi.md/sites/default/files/imag_file/Notiunea%20si%20caracterizarea%20generala%20a%20infractiunilor%20ecologice.pdf, accessed on 10.03.2022.

Recovering environmental damage is a difficult and complex task that cannot be performed completely and perfectly every time because:

- **The damage is not always recoverable;**
- **The source of pollution is often inaccurate and therefore the perpetrator cannot be identified.**

It is difficult to establish a causal link between the polluting action and the damage caused, because the damage often occurs later, which is why a presumption of the probability of a causal link is established. The causal link is often difficult to establish also because of the plurality of potential sources of environmental damage, and especially because of their nature[5].

Thus, in order to establish the damage and the causal link between the act committed and the damage caused to the environment, environmental expert review or forensic expertise is used, as appropriate, to determine the chemical composition of the harmful substances and the nature of the pollutant in the polluted natural environment. The effectiveness of expert review depends on the professional level and expertise of the official examiner. The expert review should identify:

- degree of contamination;
- extent to which the maximum permitted concentrations is exceeded for these substances;
- assessing the risk of people getting sick;
- causes of death or illness of fish/animals;

In order to correctly determine whether an environmental crime has been committed, the damage caused to the environment and the causal link between them, it is necessary to investigate the site of the incident immediately after the environmental pollution has been detected in order to collect data and identify traces of the crime. This allows collecting important information and data about the act, data about the situation, mechanism, characteristics and extent of pollution. In addition, the investigation on the site will allow identifying and remedying the traces of the crime. The following items are usually examined in these cases:

- areas of the environment that have been contaminated (areas of contaminated soil, reservoirs, rivers, their banks and embankments, neighboring territory, areas of territory close to the midpoint of atmospheric emissions, etc.);
- perished fish and animals, poisoned agricultural products, etc.;
- sewage systems, treatment plants, sedimentation tanks, storage ponds, means of disinfection and treatment of hazardous emissions and waste from enterprises, pipe networks, drains;
- production area (together with the premises);
- landfills, waste disposal sites, hazardous substance dumps;
- industrial waste disposal vehicles.

Failure to determine the damage caused to the environment prevents holding the perpetrator criminally liable. Thus, the elements of crime are interdependent and need to be determined in establishing the causal link between the damage caused and the act, its recovery, and the remedy of the affected areas.

5 https://ibn.idsi.md/sites/default/files/imag_file/Notiunea%20si%20caracterizarea%20generala%20a%20infractiunilor%20ecologice.pdf, accessed on 10.03.2022

1.2. LAW ENFORCEMENT AND ENVIRONMENTAL BODIES INVOLVED IN THE DETECTION AND INVESTIGATION OF ENVIRONMENTAL CRIMES

Inspectorate for Environmental Protection

IEP is the specialized authority, operating under the Regulation on the functioning of the Inspectorate for Environmental Protection, approved by Government Decision 548/2018. Its mission is to exercise state inspection and supervision, prevent and counteract violations of legal provisions in the following areas:

IEP is primarily focused on inspecting the environmental situation in the territory, exercising state environmental inspection over entrepreneurial activities in all sectors of the national economy and taking effective action to respond and sanction environmental offenses committed by individuals and legal entities.

The Inspectorate for Environmental Protection performs environmental inspection in line with Law 131/2012 on State Inspection of Entrepreneurial Activity, in the areas of competence mentioned above, verifying economic entities' compliance with the rules stated in the environmental permit issued for the specific area of activity and the environmental protection law.

Two types of control can be carried out: unforeseen - if there is credible information or good reason to believe that the law has been violated and planned - no more than once in a calendar year.

Environmental inspection consists of any form of verification, review, audit, assessment and/or analysis, with the aim of ascertaining compliance with the law and verifying facts relevant to the field of inspection, on the site and/or by requesting directly that the inspected person submits documents and other information by post, including e-mail, or by telephone, information that the inspected person is not obliged to submit by law. Inspectors may request only the information that according to the law must be stored and submitted by the inspected person.

Depending on the irregularities detected, the Inspectorate for Environmental Protection will act as follows:

- in the case of minor violations, only recommendations may be made indicating ways of remedying the violations, rather than sanctions provided for by the Contravention Code or any other law, and no restrictive measures may be applied.
- in the case of serious violations, in addition to remedial recommendations and setting deadlines for removing the violations, sanctions may be applied, but not restrictive measures.
- in the case of very serious violations, remedial recommendations are made, sanctions and/or restrictive measures are applied.

The inspection report is a document confirming that the inspection has been carried out and containing all the information on the inspection carried out, the procedures applied and the findings made, prescriptions and recommendations formulated on the basis of findings, the restrictive measures applied and penalties imposed following the inspection.

The Prosecutor's Office and its territorial subdivisions

According to Law 3/2016 on the Prosecutor's Office, this is a public institution within the judicial authority, which, in criminal proceedings or in other proceedings as provided by law, contributes to the observance of the rule of law, act of justice, protection of rights and legitimate interests of individuals and society.

In environmental protection, the Prosecutor's Office is competent to examine violations of environmental legislation that fall under the Criminal Code and are qualified as crimes. If the contravention proceedings find that the alleged contravention was committed in conditions that place it under criminal law, the case shall be referred without delay, by means of a reasoned decision, to the relevant prosecutor according to jurisdiction.

The IEP may notify the criminal investigation body/Prosecutor's Office about the violation of environment protection law if there are clear signs of reasonable suspicion of a crime. The criminal investigation body/ Prosecutor's Office may take action on its own initiative if there are clear signs that justify reasonable suspicion that one of the crimes has been committed and request that the Inspectorate for Environmental Protection checks whether the relevant legislation has been violated and the damage caused by the violation.

Upon completion of criminal investigation, the criminal investigation body/Prosecutor's Office either issues an order to terminate criminal investigation if no crime was found, issues an order or draws up an indictment containing information about the crime and the investigated person, a review of the evidence confirming the fact and the guilt of the accused, the arguments put forward by the accused in defense and the results of the arguments verification, mitigating or aggravating circumstances, the charge against the accused with the legal classification of his/her actions and a note on the referral of the case to the competent court.

Once the criminal case is sent to court, the latter will review the file and attached evidence and will sanction the person, if found guilty, or acquit the person if no crime was committed or the crime is found to have been committed by someone else.

Courts

According to Law 514/1995 on the organization of Judiciary, courts shall administer justice in order to protect and exercise the rights and fundamental freedoms of citizens and their associations, of enterprises, institutions and organizations. Courts examine all cases regarding civil, administrative, contravention and criminal relations.

Thus, courts examine all cases involving violation of the environmental law that have been referred for review. When reviewing cases of environmental law violation, the court shall consider the human rights rules and standards, in particular the right to a healthy environment, as well as the methods of recovering/compensating the damage caused both to people and to the environment.

Once the case review is completed, the court issues a judgement decision that establishes violation of the environmental protection law, sanctions the guilty persons and orders reparation/recovery of the damage caused to the person by the violation of his/her rights and the damage caused to the environment, or rejects the requirements of the official examiner or the criminal investigation body, as appropriate.

Court judgements decisions may be appealed to a higher court by parties to the proceedings. The deadline for appealing is different for each type of judgement and is indicated in the operative part of the judgement.

2. INVESTIGATION OF ENVIRONMENTAL CRIMES BY SPECIFIC AREAS

2.1. INVESTIGATION OF ENVIRONMENTAL CRIMES IN THE FIELD OF FOREST FUND MANAGEMENT

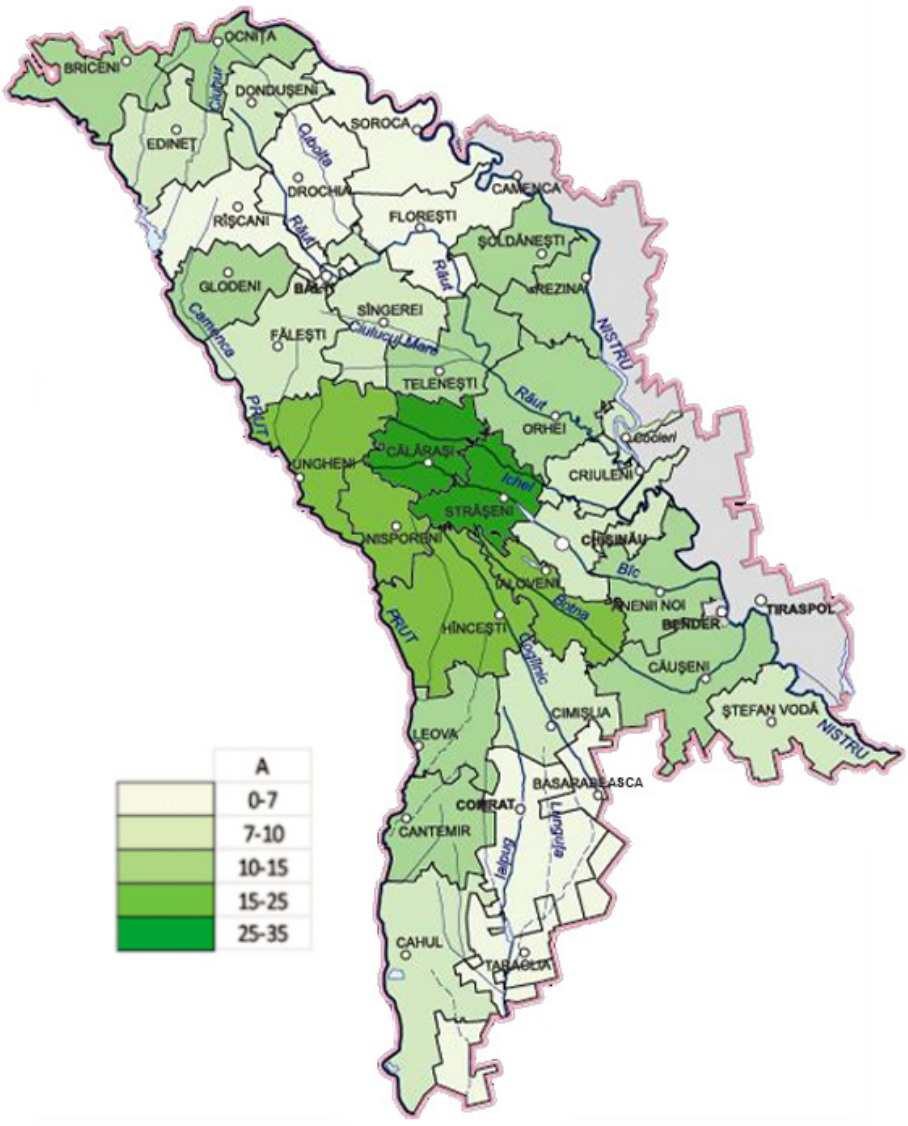

Figure 1. Forest Fund of the Republic of Moldova

2.1.1. FOREST FUND: DEFINITIONS AND MANAGEMENT

According to the legislation of the Republic of Moldova, **the forest fund**[6] comprises all forests, land intended for afforestation, land serving the needs of forest culture, production or management, ponds, riverbeds, as well as non-productive land, included in forestry planning, according to the law, regardless of the nature of ownership

6 Forest Code 887 of 21.06.1996, Article 2 https://www.legis.md/cautare/getResults?doc_id=118482&lang=ro#

In 2020[7], in the Republic of Moldova the forest vegetation together with the forest fund constituted 425.4 thousand ha or 12.6% of the country's area, where: the area covered with forests from the forest fund constitutes 381.8 thousand ha (afforestation rate - 11.4%, being much below the European average of about 30%), including: State ownership - 363.4 thousand ha, of which 337.8 thousand ha (93.1%) managed by Moldsilva Agency, public property of administrative-territorial units (APL) - 58.3 thousand ha (14%) and, respectively, 3.7 thousand ha, or 0.01% - private property. According to the distribution of forest fund, the largest areas covered with forests are found in the districts of Hincesti, Orhei, Straseni, Calarasi, Ungheni (see Figure 1).

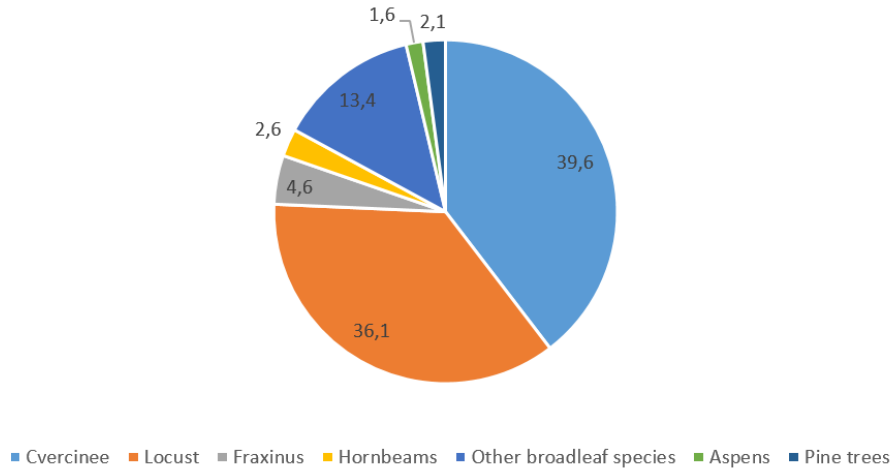

Figure 2. Distribution of forests by main forest formations

The afforestation level has been insufficient in the past years, which in turn leads to a continuous decrease in forest biodiversity and low bioproductive potential of forests. Following the analysis of forest monitoring data, the Republic of Moldova, along with some European countries such as the Czech Republic, Denmark, Germany, etc., was included in the group of countries with heavily affected forests (percentage for damage classes 2-4 exceeds 20%)[8].

Management of the Forest Fund

Moldsilva Agency is the central administrative authority, subordinated to the Ministry of Environment, empowered to ensure the implementation of state policy on forestry and hunting, ensuring the protection and security of forests and wildlife, maintenance and conservation of biodiversity of the Republic of Moldova. The Agency operates in accordance with the Regulation on the organization and operation of Moldsilva Agency, structure and staffing of its central office, approved by Government Decision 150/2010. The area of the forest fund and forests under the management of Moldsilva Agency evolved relatively constantly during 2010-2020.[9]The forest fund is managed by forestry enterprises and other state-owned enterprises, as well as individuals and/or legal entities legally empowered with such powers.

7 National Bureau of Statistics, accessed – 23.12.2021, https://www.ccrm.md/ro/curtea-de-conturi-a-examinatgestionarea-fondului-forestier-de-80_92179.html

8 https://www.legis.md/cautare/getResults?doc_id=63247&lang=ro, Parliament Decision approving the Strategy for the Sustainable Development of the Forestry Sector in the Republic of Moldova 350-XV of 12.07.2001

9 Materials of the Scientific-Practical Symposium ‚Ensuring sustainable forest management by implementing forest treatments and promoting natural regeneration, afforestation', June 2020: http://moldsilva.gov.md/public/files/Materiale-simpozion_1.pdf, p.7

Forests managed by administrative-territorial units (54.5 thousand ha) are classified as land and soil protection forests, as well as forests for the protection against harmful climatic and industrial factors. They are characterized by small bodies scattered outside the build-up area of rural localities, where the forestry regime is literally not observed, there are no management projects, care measures are carried out on a case-by-case basis, and are seriously affected by grazing and illegal logging and are polluted with waste[10].

The forest vegetation, consisting of shelter belts alongside agricultural lands and roads, groups of trees and solitary trees within towns and other settlements, not included in the forest fund, occupies an area of 51.9[11] thousand ha.

The owners of these lands are rural local public authorities that do not have specialized staff to fight illegal logging, unauthorized grazing and pollution of green areas with waste. Thus, there is a massive reduction of green areas due to their conversion into built-up areas. In the Republic of Moldova, large areas of green areas are sold or leased. Several green areas around water basins, squares and parks in municipalities have deteriorated in the past years. In addition to shrinking areas covered with vegetation, pollution of green areas is another serious environmental problem. The contracting of green areas increases urban environmental risks, with an immediate negative impact on their viability and sustainability, on people's quality of life and health.[12]

2.1.2. REGULATORY FRAMEWORK APPLICABLE TO THE FOREST FUND

Policy framework: Parliament Decision 350/2001 approved the Strategy for the ***Sustainable Development of the Forestry Sector in the Republic of Moldova***, numerous international conventions and agreements on environmental protection have been signed and ratified, directly or indirectly aimed at the protection of forest resources and conservation of forest biological diversity, including the *Convention on Wetlands of International Importance especially as Waterfowl Habitat* (Ramsar, 1971), *UN Framework Convention on Climate Change* (Rio de Janeiro, 1992), *Convention on the Protection and Use of Transboundary Watercourses and International Lakes* (Helsinki, 1992).

Other relevant policy documents are:

- Environmental Strategy for 2014-2023 and Action Plan for its implementation, approved by Government Decision 301/2014
- State Programs for Regeneration and Afforestation of the Forest Fund 2003-2020, approved by Government Decision 737/2003.

Main legislation on forestry:

- Land Code 828/1991;
- Forest Code 887/1996;
- Law 1515/1993 on Environmental Protection;
- Law 439/1995 on the Animal Kingdom;
- Law 1102/1997 on Natural Resources;
- Law 1538/1998 on State Protected Areas;
- Law 1041/2000 on Improvement of Degraded Land though Afforestation;
- Law 94/2007 on the Ecological Network;
- Law 29/2018 on Delimitation of Public Property;
- Law 131/2012 on State Inspection of Entrepreneurship Activity;
- Law 160/2011 on Regulation of Entrepreneurial Activity by Authorizations.

10 http://www.moldsilva.gov.md/pageview.php?l=ro&idc=180&t=/Fondul-forestier-national/Resursele-forestiere
11 Environmental Strategy for 2014-2023 and Action Plan for its implementation, approved by Government Decision 301 of 24.04.2014
12 Idem

According to Article 62 of the Land Code, the forest fund comprise the land covered by forests, as well as land not covered by forests but intended for afforestation. The legal status of forest fund is regulated by the Forest Code. Lands of the forest fund are used by enterprises, institutions, forest management organizations and other enterprises according to the forest-related purpose. Local government authorities, along with state environmental protection bodies, may allocate lands from the forest fund to citizens, enterprises, institutions and organizations for temporary use for agricultural purposes. According to Article 2 of the Forest Code, forests, land intended for afforestation, land allocated to forest management company, as well as non-productive land, included in forestry plans or in the Land Register as forests and/or forest plantations, constitute the Forest Fund. It covers all forests, regardless of the type of ownership and form of company.

According to Article 33(1) of the Forest Code, services related to the use of forests, as well as the results of performing the forest protection functions, are considered products of the forest, part of the forest fund, and the results of using the forest for scientific research, recreation, tourism, sports are considered non-wood products of the forest. The way of allocating and withdrawing lands from the forest fund is established by the Land Code, and the way of using it - by forest legislation.[13]

2.1.3. LIABILITY FOR VIOLATING THE LEGISLATION ON FOREST FUND MANAGEMENT

Liability for violating the forest legislation is governed by several laws: Forest Code, Contravention Code and Criminal Code.

Liability for violating the forest legislation according to Forest Code

According to the Forest Code, compliance with the status on the forest fund, not subordinated to the central forest authority, is ensured by their owners. IEP and LPAs check compliance with the forest status. State inspection over the condition, use, regeneration, guarding and protection of forest and hunting funds is exercised by IEP.

Thus, IEP cooperates with Moldsilva Agency in order to detect and respond to forest-related contraventions. As per Order 25 of 08.04.2010 on inspecting the condition of shelter belts and forest fund managed by local public authorities and Order 50 of 21.03.2011 on inspecting the condition of shelter belts and forest fund managed by local public authorities, IEP actively participates in the implementation of regulations related to fighting illegal logging and ensuring sustainable development of forest ecosystems.

Article 85 of the Forest Code stipulates that individuals and legal entities are liable for violations of forest legislation both by paying compensation for the damage caused and by incurring restrictive actions, as appropriate. The amount of compensation for forest crimes is determined according to the tariffs set out in Annexes 1-15 to the Forest Code. If forest beneficiaries break the rules for the release of standing timber in forests, the amount of compensation for the damage caused shall be calculated in accordance with Annex 16 to the Forest Code. The amounts of the damage caused by violating the forestry legislation shall be refunded to the owner of the forest fund.

According to Article 84 of the Forest Code, forest crimes are:

a. illegal cutting or damaging of trees and bushes such that they cease to grow;
b. illegal damaging of trees and bushes such that they do not cease to grow;
c. destroying and damaging forests as a result of burning or careless use of fire;
d. breaking the fire safety rules and sanitary rules in the forest;
e. destroying and damaging forest crops, young seedlings of naturally regenerated trees, natural and pre-existing seedlings on land intended for reforestation;

13 According to Article 62 of the Land Code and Article 17 of the Forest Code

f. destroying and damaging seedlings and cuttings in nurseries and forest plantations;
g. violation of timeframes for the return of land from the forest fund or failure to comply with obligations to bring back the land to a usable condition;
h. violations of procedures and timeframes for the afforestation of exploited forest areas and of unforested land from the forest fund;
i. unauthorized use of lands from the forest fund for logging, digging up plants or for constructing administrative buildings, warehouses or other structures;
j. collecting or killing plants, capturing or killing animals included in the Red Book of the Republic of Moldova and in the Appendices to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
k. unauthorised harvesting of grass and illegal grazing of cattle on lands from the forest fund;
l. unauthorised special use of objects of the animal and plant kingdoms;
m. violation of the established manner of logging, collection and transportation of timber;
n. destroying and damaging trespassing signs, organizational signs and forest landmarks, visual information and advertising objects, fencing and structures in recreational areas;
o. destroying and damaging of hay and pasture land from the forest fund;
p. destroying and damaging of drainage ditches and systems roads and engineering installations on lands from the forest fund;
q. destroying and damaging anthills;
r. unauthorized location of beehives and apiaries on lands from the forest fund or failure to observe indications in forestry permits on their location;
s. unauthorized removal and destruction of the layer of fallen leaves, living cover, and topsoil for use for purposes other than forestry;
t. littering the forest fund with construction, household and other waste and residues;
u. driving and parking vehicles or other means of transport on lands from the forest fund, off public roads and in prohibited places;
v. destroying forest fauna, except for quarantine species.

According to the Forest Code, the funds collected by recovering the losses of forest production are used to regenerate, guard and protect forests and increase their productivity. Although, the same article stipulates that the method of determining the losses of forest production and the use of funds received because of recovering such losses, as well as the list of enterprises, institutions and organizations exempted from the recovery of such losses, shall be determined by the Government, but such a Government decision has not been approved so far.

Losses in forest production caused by withdrawing the land from the forest fund to use it for other purposes than forestry, by limiting the rights of owners of lands from the forest fund and by the worsening quality of forests due to the work of enterprises, institutions, organizations and citizens shall be fully recovered into the forest conservation and development fund. Compensation for these losses is paid at the same time with the compensation for damages. The indicated losses are recovered by the enterprises, institutions, organizations and citizens that were allocated lands from the forest fund, as well as by the enterprises, institutions, organizations and citizens around which protection, sanitary and guarding areas are established, leading to the withdrawing the forest fund lands from the forest production cycle. At the same time, the Forest Code provides for specific liability for violation of prohibitions.

Illegal act and omissions, as well as sanctions for violating the prohibitions of the Forest Code, are reflected in the table below:

Table 1. Sanctions stated in the Forest Code

Article	Description/sanction
Nullity of transactions by forest landowners in violation of the law (Article 83 of Forest Code)	Including the value of lands from the forest fund as a share of the business entities' authorized capital, using such land as a pledge, other actions that could result in a change of the forest landowner is prohibited. The act of selling, donating, pledging or of another nature between forest landowners in violation of the law are declared null and void by courts.
Confiscation of illegally acquired timber and other forest products (Article 86 of Forest Code)	Illegally acquired timber and other forest products shall be confiscated and transferred to the forest management enterprise, institution or organization or to the forest beneficiary. If it is impossible to confiscate the illegally acquired forest products, then their value shall be recovered.
Liability for illegally destroying and damaging forest vegetation outside the forest fund (Article 87 of Forest Code)	Persons guilty of illegally destroying and damaging forest vegetation outside the forest fund are liable under the same legislation as for Group I forests with special protection regime.
Compensation for damages and foregone revenue to forest landowners (Article 88 of Forest Code)	Damages caused by withdrawing and occupying temporarily the lands from the forest fund, by limiting the rights of owners of lands from the forest fund and by the worsening quality of forests due to the work of enterprises, institutions, organizations and citizens shall be fully recovered, including the foregone revenues, for the benefit of landowners from the fund for compensations to affected parties. Compensation for damages shall be made, in the manner stated in the legislation, by enterprises, institutions, organizations and citizens that were allocated lands from the forest fund, as well as by enterprises, institutions, organizations and citizens whose activities restrict the rights of forest landowners or deteriorate the quality of nearby forests.

Contravention liability

According to Article 399 (1) and (2) of the CvC of RM 218/2008, a case of a contravention shall be solved by the official examiner in whose jurisdiction the contravention was committed. He/she shall impose the sanctions stipulated in the special part of Book Two of CvC within the limits of his/her competence and only while exercising his/her official duties.

The official examiner can establish contraventions the establishing, solving and sanctioning of which are assigned to the competence of other authorities. In such cases, the examiner shall submit the documentation establishing contraventions to the respective authorities.

According to Article 405 of CvC of RM, IEP is in charge of establishing and examining contraventions related to forestry, stated in the following articles:

Table 2. Sanctions stated in the Contravention Code

Article	Description/sanction
Forest exploitation contrary to the purpose or requirements of the law (Article 121)	Forest exploitation contrary to the purpose or requirements stipulated in the authorization (order) for cutting trees or in the forestry permit shall be sanctioned by a fine of 24 to 30 conventional units for individuals, by a fine of 120 to 180 conventional units for legal entities.
Illegal cutting or damaging of trees and bushes (Article 122)	1) The illegal cutting or damaging of trees and bushes such that they cease to grow or damaging trees and bushes that does not interrupt their growth shall be sanctioned by a fine for individuals of 24 to 30 conventional units or by unpaid community work of 40 to 60 hours and by a fine of 240 to 300 conventional units for legal entities. (2) The illegal cutting of trees and bushes in green areas, damaging them or damaging parts of them including because of fire, cutting and/or relocating them from green areas to other places during construction without the permission of the local public authorities working with the public authority responsible for the environment shall be sanctioned by a fine of 24 to 30 conventional units for individuals, by a fine of 240 to 300 conventional units for legal entities. (3) The actions specified in para.(1) committed by persons responsible for protecting forest vegetation shall be sanctioned by a fine of 30 to 60 conventional units. (4) An authorization issued by persons responsible for protecting forest vegetation for cutting wood in violation of the law or of other legal acts shall be sanctioned by a fine of 42 to 60 conventional units for individuals, by a fine from 60 to 120 contravention units for responsible persons.
Violations of procedures and timeframes for the afforestation of exploited forest areas and of unforested land (Article 125)	Violations of the procedures and timeframes for the afforestation of exploited forest areas and of unforested land from the forest fund as well as of exploited forest areas on land covered by forest vegetation outside the fund shall be sanctioned by a fine for individuals of 18 to 30 conventional units or by unpaid community work for 40 to 60 hours and by a fine of 120 to 180 conventional units for legal entities.

Article	Description/sanction
Deliberate destruction or damaging of hay and pastureland, of drainage ditches in forests, of drainage systems, of roads and engineering installations on lands from the forest fund (Article 126)	The deliberate destruction and damaging of hay and pastureland, of drainage ditches in forests, of drainage systems, of roads and engineering installations on land of the forest fund shall be sanctioned by a fine for individuals of 6 to 12 conventional units or by unpaid community work for 20 to 40 hours, by a fine of 60 to 120 conventional units for legal entities.
Violations of rules for the use of forest fund objects (Article 127)	(1) The unauthorized mowing of grass for hay and unauthorized pasturing on lands from the forest fund in windbreak forests and in green areas shall be sanctioned by a warning or by a fine of 3 to 6 conventional units or by unpaid community work for 20 to 40 hours. (2) The unauthorized collection of wild fruits and berries, nuts, medicinal herbs and other plants or vineyard snails in areas where this is prohibited or is allowed only with a forestry permit as well as violations of established collection timeframes, amounts and procedures shall be sanctioned for individuals by a warning or by a fine of 3 to 6 conventional units or by unpaid community work for 20 to 40 hours, by a fine from 60 to 120 conventional units for legal entities.
Deliberate destruction or damaging of animal habitats (Article 129)	The deliberate destruction or damaging of animal dens, anthills, birds' nests and other habitats on lands from the forest fund shall be sanctioned by a fine of 12 to 30 conventional units or by unpaid community work for up to 60 hours.
Unauthorized location of beehives and apiaries on lands from the forest fund or failure to observe indications in forestry permits on their location (Article 130)	The unauthorized location of beehives and apiaries on lands from the forest fund or the failure to observe indications in forestry permits on their location shall be sanctioned by a warning or by a fine of 3 to 6 conventional units for individuals, by a fine of 30 to 60 conventional units for legal entities.
Deliberate destruction or damaging on forest land of trespassing signs, of organizational signs, of barriers and guard rails, advertising objects and visual information (Article 132)	The deliberate destruction or damaging on lands from the forest fund of trespassing signs, notice boards, barriers, organizational signs, forest landmarks, fencing and structures in recreational areas, other posted public information or of structures for organizing forests shall be sanctioned by a fine of 6 to 12 conventional units or by unpaid community work for 60 hours.
Commissioning manufacturing units without the means to prevent negative impacts on forests (Article 133)	Commissioning transportation companies, divisions, units or means for building community structures or new or renovated structures without the means to prevent negative impacts on the condition and regeneration of forests shall be sanctioned by a fine of 18 to 30 conventional units for responsible persons with or without the deprivation of the right to carry out certain activities for a period of 3 months to 1 year.

Article	Description/sanction
Unauthorized use of lands from the forest fund and green areas for digging up plants or for constructing administrative buildings, warehouses or other structures (Article 134)	The unauthorized use of lands from the forest fund and green areas for digging up plants or for constructing administrative buildings, warehouses or other structures shall be sanctioned for individuals by a fine of 18 to 24 conventional units or by unpaid community work for 20 to 60 hours, by a fine of 180 to 240 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year.
Driving and parking vehicles on lands from the forest fund, in green areas off public roads and in prohibited places (Article 135)	Driving and parking vehicles on lands from the forest fund, in green areas off public roads and in prohibited places shall be sanctioned by a warning or by a fine of 3 to 6 conventional units.

In 2019[14], about 1424 contraventions were found based on Article 121, 122, 123, 126, 130, 132, 134, 135, 136, 137, 141, 142, 182 of the Contravention Code, of which 687 contravention cases were received by IEP from other specialized bodies: 645 came from Police Inspectorates, 11 from the Prosecutor's Office and 31 from other specialized bodies, such as Border Police and Moldsilva Agency.

According to the information presented by IEP, during 2017-2020, 1907 inspection reports were drawn up for violations in the field of forestry, with fines totaling MDL 2.6 million and calculated damage - MDL 2.7 million. During 2017-2020 fines collection rate was 49.5%, or MDL 1.3 million, and the rate of fines for damages - 21.8%, or MDL 0.5 million.

Criminal liability

Most components of environmental crimes provided for in the RM CC are material and require certain harmful consequences such as: damage to public health, mass perishing of animals, pollution or poisoning of the environment, death of a person, large-scale destruction of wildlife and other serious consequences.

Given that environmental crimes have a pronounced latent character, to criminalize the act it is necessary to analyze not only the harmful consequence that has occurred, but also the state of danger created by committing the socially harmful act, provided for by the criminal law, as well as the causal link between them.

14 http://ipm.gov.md/sites/default/files/2020-06/ANUAR%20TOTAL%202019%2005.15_1.pdf, p.158, accessed on 05.02.2022

The forest-related crimes provided for by RM CC are reflected in Table 3.

Table 3. Forest-related crimes

Article	Description/sanction
Illegal Cutting of Forest Vegetation (Article 231)	The illegal cutting of trees and/or bushes from the forest fund or in natural areas protected by the state committed: a) by persons responsible for the protection and security of forest vegetation; b) on a scale exceeding 500 conventional units; shall be punished by a fine in the amount of 850 to 1350 conventional units or by community service for 180 to 240 hours or by imprisonment for up to 3 years, in all cases with (or without) the deprivation of the right to hold certain positions or to practice certain activities for up to 3 years, whereas a legal entity shall be punished by a fine in the amount of 2000 to 4000 conventional units with the deprivation of the right to practice certain activities.
Destroying or Damaging Woodlands (Article 232)	Destroying or damaging on a large-scale woodlands as a result of imprudent use of fire or other sources of excessive danger shall be punished by a fine in the amount of 550 to 950 conventional units or by community service for 120 to 240 hours or by imprisonment for up to 3 years, whereas a legal entity shall be punished by a fine in the amount of 2000 to 4000 conventional units with the deprivation of the right to practice certain activities. Destroying or damaging on a scale exceeding 500 conventional units of woodlands as a result of fire shall be punished by a fine in the amount of 650 to 1350 conventional units or by community service for 180 to 240 hours or by imprisonment from 3 to 7 years, whereas a legal entity shall be punished by a fine in the amount of 4000 to 7000 conventional units with the deprivation of the right to practice certain activities or liquidation of the legal entity.

Analyzing the provisions of Article 231 of the RM CC, we find that only vegetation cutting is regulated, but the forest ecosystem is also damaged by breaking, unauthorized uprooting of trees/bushes. At the same time, logging refers only to vegetation in the forest fund, without including green areas, wetlands, water bodies and other lands with special protection purposes. Often, the use of land in special categories contrary to their intended use results in their degradation, or in the reduction of special-purpose areas, destroying the ecosystem (capital construction results in the irreparable removal of the land from its natural circuit). Since these circumstances are not regulated in the RM CC, prosecutors, as a rule, initiate criminal investigation under Article 352 of the RM CC (Arbitrariness).

2.1.4. PROBLEMATIC ASPECTS

The way forest fund is managed is a decisive factor in ensuring its expansion and sustainability. The Court of Accounts of the Republic of Moldova has identified several shortcomings in the management of the national forest fund.

Case study 1. Court of Accounts and Moldsilva Agency

In December 2021, the Court of Accounts of the Republic of Moldova (CoA), in its Compliance Audit Report on the administration and management of the forest fund by Moldsilva Agency, assessed the degree of compliance in administration and management of the state forest fund, whether the mechanisms applied to the management of state-owned forest lands correspond to the regulatory framework in force[15].

The most significant deficiencies underlying the overall audit conclusion are as follows:

- the Real Estate Register (RER) records property rights on only 30.9 thousand ha, or 9%, of the total 337.8 thousand ha administered by Moldsilva Agency;
- to ensure the implementation of the 2019-2023 State Program for Real Estate Delimitation, the inventory counting of lands from the forest fund was completed in the districts of Briceni, Drochia, Dondușeni, Edineț, Florești and mun. Balti. Thus, out of a total of 393 plots of land with an area of 25.5 thousand ha and 12.8 thousand m2, only 39 plots of land with an area of 21.5 ha and 4.2 thousand m2 were registered in the RER;
- failure to register the forest fund lands in the RER has resulted in its fragmentation and arbitrary appropriation by third parties. Thus, 17 plots of land assimilated by the local public administration (LPAs) were identified and their use was changed from forest land to agricultural or construction land, and 13 plots of land were sold by third parties;
- the audit found that a piece of land from the forest fund, removed from the management of the Sil-Răzeni Forestry Enterprise, is recoded as 'agricultural land' in the RER, but in fact it is built up, which, according to the extract from the RER, are agricultural, agro-industrial constructions;
- lands of 337.8 thousand ha in area, administered by Moldsilva Agency and managed by forestry administrations are not accounted for;
- During 2017-2019, (according to the Government Decision 770/2016) Moldsilva Agency did not take sufficient measures to conclude with the lessees' additional agreements on increasing the amount of lease payments. Thus, as of 30.09.2020, out of a total of 346 active lease agreements, 58 lessees (with an area of 80.2 ha) accepted the conclusion of additional agreements on updating the amount of payment for the lease of forest fund. As a result, in 2020 alone they resulted in a failure to collect the full volume of revenue in the amount of MDL 12 million;
- provisions that are contrary to the interests of the lessee, included in the lease contracts and implemented, resulted in a failure to collect about MDL 2 million in 2016-2021;
- misinterpretation and misapplication of legal norms by Moldsilva Agency, has generated conditions for assigning the lease rights related to lands from the forest fund, creating the necessary precondition for third parties to use them through arrangements, the value of which could be estimated at about EUR 5.8 million.
- due to improper management by the responsible officials of Moldsilva Agency, receivables of MDL 9.1 million were recorded for lease fees for the use of lands from the forest fund, of which MDL 5.9 million were impaired;
- the government-approved timber collection indicators were found to be exceeded, so for volumes exceeding the permitted indicator, the Environment Agency issued logging permits in violation of the law.

15 https://www.ccrm.md/ro/curtea-de-conturi-a-examinat-gestionarea-fondului-forestier-de-80_92179.html, accessed on 05.02.2022.

A. Leasing of the forest fund

According to Articles 6, 25 and 26 of Forest Code, the forests in the Republic of Moldova, used in the public interest, may be only in public ownership, they can be managed or used by legal entities/individuals under lease conditions, free or short-term use - **for hunting, scientific research and recreation**. The method and conditions for allocation of lands from the forest fund are established in the Regulation *on the allocation of land in use from the forest land for hunting and/or recreation purposes*, approved by Government Decision 187/2008. During 2008-2012, the forestry enterprises, as well as Moldsilva Agency, leased out 15034.074 ha of forest land, concluding 842 contracts.

At present, 376 lease contracts are concluded between the Agency and other beneficiaries on an area of 3752.2675 ha, out of which 25 are for hunting purposes of 2870.671 ha in area and 351 contracts for recreation of 881.59 ha in area. Around 92% of lease agreements are concluded for recreational purpose.[16]

The above-mentioned information reveals a strong concentration of lands and a higher lease fee for the land in the vicinity of the capital city, aspects that are not considered in the methodology for calculating the lease payment for this land.

In this context, the amount of the lease payment for recreational land was increased from MDL 4,025 to MDL 19,092.37 per ha by Government Decision 770/2016, and Moldsilva Agency did not take measures to change the lease fee in the lease contracts, according to the methodology for price establishment in the fields of forestry and hunting, taking into consideration the delimitation factors based on location, access to the means of communication, organization etc.

Circumstances in this case were reflected in the *Audit of Moldsilva Agency financial reports as of 31.12.2019*, approved by Decision of the Court of Accounts 15/2020[17], according to which, the failure to review and adjust the value of all forest land's lease contracts for 2017-2019 resulted in the failure to collect the full volume of revenues in the amount of MDL 42.8 million.

The CoA audit identified about 14% of initial lessees that built capital constructions and recorded them in the Real Estate Register, including unfinished buildings, and when they sold them, they illegally conveyed the right to lease fee to third parties. The sales advertising (illegal) for this forest land confirms that the actual price is higher than indicated in the contract and there is a great risk of selling the forest land together with the with private constructions built by the lessees.

Lessees often build their unauthorized capital constructions on the forest land either on their own will or with the abusive consent of authorities responsible for both the forest land management and state inspection of quality in construction, including local public authorities. Consequently, the Government loses thousands of hectares of land, removed from the forest fund, although according to Article 78 of Forest Code, reduction and fragmentation of the forest fund is prohibited. According to the information provided by PGO, criminal cases were started because of embezzlement of public goods (forest land) through the illegal use by the person to whom these goods were entrusted based on a title and for a certain purpose, which produced huge damage (Articles 45, 327(2) (b)(1) and Articles 45, 191(5), 231(a) of RM CC). In fact, building capital constructions and using this land for purposes other than forestry results in fragmentation of the forest and removal from the forest fund, which is contrary to both forestry and land legislation.

The visible danger caused by the lease of forest land derives from its fragmentation, which puts the forest under pressure and limits it in performing its functions, especially in ensuring the sustainability and biological diversity, and the construction of new infrastructure and extension of settlements prevail over the conservation and sustainable use of natural resources.

16 https://tribuna.md/2020/05/30/agentia-moldsilva-dumitru-cojocaru-este-gata-in-orice-timp-sa-discute-cu-oricepersoana-care-vine-cu-viziuni-clare-si-argumentate-pentru-viitorul-fondului-forestier/, accessed on 05.02.2022.

17 https://www.legis.md/cautare/getResults?doc_id=121649&lang=ro, accessed on 05.02.2022

B. Compliance with the wood collection, use and circulation process

Wood is collected in the forests of the Republic of Moldova (in compliance with Articles 33-36 of Forest Code) in the process of cutting secondary products (*emissions, cleaning, thinning, tending cutting*), cutting main products (*regeneration, conservation, species cutting*) and environmental reconstruction. For 1993-2015, the total area of forest logging performed by Moldsilva Agency increased 1.4 times, and the area on which main product were cut – 8.2 times.

The phenomenon of illegal logging is the most common violation detected by employees of forestry branch and public entities with inspection powers in the field of environmental protection. According to the Order of Moldsilva Agency 285/06.12.2019[18], illegal logging in a total volume of 2,617.5 m^3 was detected in the period in between inspections (spring autumn 2019). Illegal logging produces significant losses for the state budget due to the failure to pay the relevant taxes and appropriation of funds obtained from sales.

The process of releasing timber in forests can be divided into 4 basic stages/procedures:

1. Planned logging/use of timber;
2. Forest exploitation;
3. Certification of timber collection places;
4. Timber release.

The possibility to collect timber in the process of cutting main products is approved by Government Decision[19]. The document which regulates the collection possibilities is entitled Forest Management Paper, and the endorsement of its preparation and the approval for a 10-year period are carried out by the Forest Research and Management Institute subordinate to Moldsilva Agency. Main product and ecological reconstruction cutting in the forest fund is authorized by the Environmental Agency[20]. The volume of required forest area measures are laid down in the Forest Management Paper and is to be coordinated with IEP.

According to Article 40 of Law 1515/1993, damaging or logging trees and other types of forest vegetation without the authorization of the central authority responsible for natural resources and environment, is prohibited and sanctioned in compliance with law. Based on point 6 in the *Regulation on the authorization of logging within the forest fund*, approved by Government Decision 27/2004, the cutting of main products and environmental reconstruction in the forest fund is authorized by EA. The forestry enterprise provides annual logging permits for all areas - the only document giving the forest ranger the right to collect and transport wood in established volumes and timeframes.

18 https://cna.md/public/files/Raport_MOLDSILVA.pdf, p. 17, accessed on 09.02.2022.

19 Government Decision 958 of 22.12.2020 approving the possibility to collect timber in the process of cutting main products for 2021-2025, https://www.legis.md/cautare/getResults?doc_id=124767&lang=ro, accessed on 09.02.2022.

20 Government Decision 27 of 19.01.2004 approving the Regulation on the authorization of logging in the forest fund and the forest vegetation outside the forest land, https://www.legis.md/cautare/getResults?doc_id=113236&lang=ro#, accessed 09.02.2022.

Forest exploitation is the process of felling trees, removing branches, and cutting trunks, separating and stacking the timber. The acceptance of timber can be performed only after full exploitation of forest areas. The managers of forest management units, forest management units' engineers, foremen and forest rangers are responsible for accepting and recording the timber. The reception team's members sign the Records of Timber Stacks compiled during the acceptance. All forest cuts are recorded in the tables provided in the land descriptions in the forest management plans. In addition, depending on the cut type, the forest management units and forestry enterprises fill out: - *the Register of forest cut records, Register of tending cut records, Register of areas not subject to cutting, Register of records related to areas with selective/repeated cuts of main product.*

After the expiry of forest logging permit, the areas and places for timber collection are tested and a protocol will be drawn up in this regard. The timber can be sold after its acceptance, according to the written order of the management of the state-owned enterprise, and the accounting records of the forest management unit. The payment is to be performed in the accounting office of the forest management unit or forestry enterprise, with the issuance of the receipt and tax invoice.[21]

According to the information provided by PGO, thanks to the recent collaboration between the PGO specialized subdivision and IEP, there are more cases of finding and prosecuting persons responsible for forest security and protection (forestry employees), admission of illegal logging of forest vegetation.

At the same time, there is a positive practice of notifying prosecutors by IEP about the results of both unannounced and planned inspections at forestry enterprises with regards to verification of the appropriateness of wood volume expected to be obtained with authorization and received after cutting, to the naturally extracted one, by stocking extracted tree stumps.

In addition, it is found that prosecutors in the territorial Prosecutor's Offices, in some cases, although they are notified by IEP about the inappropriateness of wood volume expected to be obtained with authorization and received after cutting, to the naturally extracted one, contrary to Article 19(3) of Code of Criminal Procedure, which legally bind the criminal investigation body to accumulate evidence for the establishment of all case circumstances, without administering and verifying evidence in order to identify the notified actions, reject the prosecution illegally.

Given the lack of a methodology to determine the maximum allowable percentage error for the volume of timber resulting from forest logging, Ministry of Agriculture, Regional Development and Environment Order 100/2020 cancelled point 16(e) in the *Instruction on the performance of revisions and operative inspections in the forest fund in public ownership*, approved by Moldsilva Agency Order 159/30.05.2016 admitting an error margin of 30%.

C. Investigation of environmental crimes related to forest land management

According to the PGO data, as per **Fully Automated Information System for recording illegal acts, criminal cases and offenders**, for 2020-2021, **13** criminal cases were initiated in compliance with Article 231 of RM CC (illegal logging of forest vegetation), 2 of which were closed because the action did not have any crime elements, 2 criminal cases were submitted to the court with indictment, 1 case – criminal investigation was ceased, the offender being brought to contravention liability, and with regards to the rest, the criminal investigation is not finished.

For comparison, according to the statistical data, in 2019, only one criminal case was started on matters of illegal logging of forest vegetation, but the prosecution is not over on this issue.

At the same time, during the reference period, in addition to committing crimes like illegal logging of forest vegetation, destroying or damaging forest areas (Article 231 – Article 232 of RM CC), prosecutors investigated cases related to the forestry enterprises' fraudulent management of assets and funds (Articles 186, 190, 191, 196, 327-329, 335, 352, 361 of RM CC).

21 https://cna.md/public/files/Raport_MOLDSILVA.pdf, p. 54, accessed on 09.02.2022.

Nonetheless, the statistical data does not reflect the real situation regarding the illegal logging of forest vegetation, because the investigated criminal proceedings/cases (submitted by prosecutors to the territorial Prosecutor's Offices) reveal that, although the notification claims illegal tree logging (*forest vegetation*) in the forest land, the prosecutors initiate criminal cases according to Article 186 of RM CC, such as theft, without taking into account the special legal object of the crime provided for in Article 231 of RM CC – *illegal logging of forest vegetation.*

If the value of illegal tree logging does not exceed 500 conventional units (Article 231(b) of RM CC), criminal investigation will not be initiated, bringing to contravention liability according to Article 122 CvC.

The special legal object of the crime provided for in Article 231 of RM CC consists of social relationships regarding the integrity of the forest fund and natural area fund protected by the state. The purpose of the examined rule is to prevent the destruction and damage of vegetation in forests, protect forests as national property of the Republic of Moldova and an important natural resource.

The material object of this crime is the trees and bushes in the forest land or the fund of natural areas protected by the state, the value of which is of huge proportions.

If the *subject* of the offense is a person responsible for forest vegetation protection and security, then the value of illegally cut trees and bushes is not relevant, and if the cutting of forest vegetation in the forest land are carried out by tertiary parties, the committed crime must present a high degree of social danger so that the crime falls under criminal law, i.e. the timber value from cut trees without authorization must be higher than 500 conventional units. Otherwise, the contravention liability intervenes according to Article 122 CvC.- Illegal cutting or damaging of trees and bushes.

Trees, forest vegetation are forest ecosystem components. They were not generated by human activity through work or investment, which is why they are not property in terms of material object of crimes against property.

According to Article 9(2) (c) of Law 29/2018, the forest (*not the single tree*) is a public property of the state, of public field, which is part of the national property.

For these reasons, the legislator established a special criminal law which criminalizes illegal actions that produce forest destruction. The Article 231 of RM CC refers to unauthorized logging of tree from the forest fund or state-protected natural areas and has no relevance to the manner, means of crimes, pursued aim and circumstances in which the forest destruction was produced. From this point of view, the illegal logging of trees in natural forests and wood acquisition will constitute only component of the crime provided for in Article 231 of RM CC - *illegal cutting of forest vegetation*, without the need for additional qualification in compliance with rules regarding the crimes against property. The objective side of the crime provided for in Article 231 of RM CC, in addition to main signs (unauthorized logging), has secondary signs as well, such as, for example, the place: *forest land or fund of state-protected natural areas.*

According to the Commentary on RM CC (Vol. II, special part) 2005 edition, namely based on the material object, the environmental crimes can be distinguished from ones against property. Unlike the material object of environmental crimes, the material object of crimes against property (committed through theft, embezzlement, fraud) *constitutes material goods, created through human work and have material value and established cost*. In this context, we conclude that in accordance with Article 116(2) of RM CC: *in case of competition between the general rule and the special one, only the special rule is applied.*

At the same time, the bushes stolen from the forest fund may be the material object of crimes against property if they are legally cut and used in compliance with the *Regulation on timber use and circulation*, other regulatory documents aimed at recording them as material goods.

Article 231 of RM CC regulating the illegal logging of forest vegetation, is not applied to actions related to illegal cutting of trees, other forest vegetation, outside the forest fund. As the result of illegal logging outside the

forest fund does not threaten the forest integrity, the contravention liability intervenes and if the timber is stolen, the general criminal rule regulating crimes against property is applied.

Most often, the criminal cases initiated under Article 186 of RM CC 'Theft' end with the termination of criminal proceedings on grounds of parties' reconciliation, but reconciliation is not applicable to crimes set out in Article 231 of RM CC, which implies the admission of certain abuses when adopting the final solution. Thus, we notice an unstable practice of finding and investigating crimes provided for in Article 231 of RM CC.

Moreover, the failure to identify the perpetrators is not a reason to refuse the initiation of criminal investigation, but only to suspend the criminal case as per Article 2871 of Code of Criminal Procedure. In this case, a criminal case had to be initiated according to Article 231(b) of RM CC.

The biggest obstacle when investigating a crime classified according to Article 231 of RM CC is to compute the damage caused to the forest fund. This is carried out based on the methodology regulated by the Forest Code, which is obsolete and establishes minimum amounts in relation with the real damage caused to the environment over time, and the central forestry authority has not taken any measures to amend the regulatory framework in this regard.

Aspects related to the review of criminal cases from the category of cases examines by courts.

Based on the portal www.aaij.justice.md it is found that the practice of adopted solutions is non-uniform in the few criminal cases submitted with indictment to the courts. According to the data of the portal managed by the *Agency for Court Administration*, over the last 5 years, 4 criminal cases threatening the integrity of the forest fund committed by persons in charge of forest security and protection, including other people, have been investigated in courts.

Thus, with regards to persons responsible for forest security and protection, accused according to Article 231(a) and Article 191(2) (4) of RM CC, only one sentence was pronounced as per Article 191(4) of RM CC for a manager of a forest management unit who committed embezzlement of timber entrusted in his/her administration, which caused huge damage to the forestry enterprise, being imprisoned for 8 years in a semi-closed penitentiary. As for accusation based on Article 231(a) of RM CC, in another episode, the criminal case was ceased due to the statute of limitation.

There is other 2 forestry employees accused under Article 231(a) and Article 191(2) and (4) of RM CC that were acquitted by the court of first instance, thus the Supreme Court of Justice quashed the judgements of the courts of appeal that upheld the sentences, sending the cases for retrial in the court of appeal. Both cases are pending in the Chisinau Court of Appeal and Cahul Court of Appeal.

At the same time, a case of a person accused according to Article 231(b) of RM CC, was acquitted by the court of first instance due to the lack of crime elements in the defendant's actions, Chisinau Court of Appeal, following the review of plaintiff's appeal (forest fund manager) admitted the request to withdraw the appeal with the termination of the appeal proceeding on the criminal case. The prosecutor did not appeal against the decision, moreover, in accordance with the proceeding termination, he/she agreed with the adopted solution.

Analysis of public information and criminal proceedings/cases investigated by prosecutors found uneven application by prosecutors of criminal law when prosecuting crimes of illegal logging in the forest fund and state-protected natural areas.

2.2. INVESTIGATION OF ENVIRONMENTAL CRIMES IN THE FIELD OF WATER RESOURCE MANAGEMENT

2.2.1. WATER RESOURCES: DEFINITIONS AND MANAGEMENT

Drinking water is a finite resource, important for agriculture, industry and first and foremost, human existence. In the context of sustainable development, the protection of surface water quality plays a significant role, as the pollution and inappropriate use of drinking water threaten the projects for development of human society.

The Republic of Moldova is a country with limited water resources. Moldova's hydrographic network consists of more than 3,500 rivers and streams: 7 watercourses with a length of over 100 km, 247 – over 10 km, 57 lakes with a water surface of 62.2 km^2 and around 3,000 artificial ponds, underground water from over 7,801 artesian wells, about 166,542 wells and springs supplied by groundwater. The total length of rivers is over 16,000 km. Nistru and Prut rivers spread on portions 630 km and, respectively, 695 km, outline the border between Moldova, Ukraine and Romania. The biggest natural lakes are situated on the Prut River's course (Beleu, Dracele, Rotunda, Fontan) and on the Nistru River's course (Bâc, Ros, Nistru Vechi). The largest artificial reservoirs are Costești-Stânca on the Prut River and Dubasari on the Nistru River.

The natural water accumulations stretch on only 62.2 km^2 in the republic and has a volume of 200-220 million m3. 250 km^2 more are artificial reservoirs that make up almost 800 million m^3. The entire water surface is not more than 1% of territory.

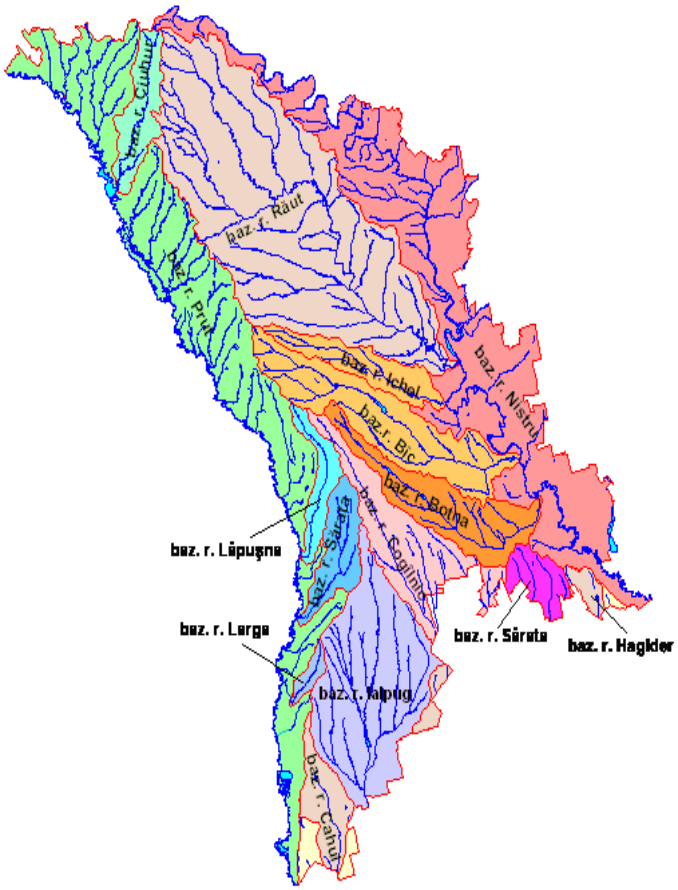

Figura 3. Harta subbazinelor hidrografice în Republica Moldova

The Republic of Moldova has few large rivers with high flow, most of which are medium and small. The are 3,085 rivers in the river network that flow which flow permanently and temporarily; 240 of them have a length of over 10 km and only 8 rivers including Nistru, Prut, Ichel, Raut, Bâc, Botna, Ialpug, Cogâlnic over 100 km. Besides

two transit rivers – Nistru and Prut that run from the Carpathian Mountains, all Moldova's rivers are fed by water from their hydrographic basin (from headwaters, surface runoff of precipitation in the river basin). This network of water basins ensures the regulation and removal of surface runoff, drinking and technical water supply, use for irrigation, navigation and other purposes. The most important source of water supply is surface water, especially from Nistru and Prut rivers, as well as groundwater sources from artesian and mine wells, springs.

The water level in the Nistru River is constantly decreasing. This disadvantage has affected not only the sharp decrease of fishery resources and fish species, but also the shipping, which is currently downgrading, for example in 1984 the freight volume transported on waterways of Nistru River was 4,111 thousand tons, in 2017 the quantity was 142 thousand tons (through the Giurgiulesti Port).

In addition to the issue related to reduced water resources, there is the issue of their quality. At present, there are signs of contamination not only of surface water, but also of groundwater bodies.

The discharge of chemical and toxic substances, over pumping of aquifers, processing of agricultural land using agrochemical substances, contamination of water bodies with substances that cause their eutrophication directly generates the degradation of water quality.

The main specific pollution indicators include the content of ammonium, nitrites, nitrates, chemical and biological consumption of oxygen, suspended materials. The concentration of pollutants in surface waters varies depending on season, the highest one being noticed during the warm period of the year. The quality of small river water is characterized by a high degree of pollution with ammonium ions, nitrites, copper compounds, oil products, phenol, surfactants, biochemically degrading substances (CBO5), as well as a low level of oxygen dissolved in water. Some rivers, particularly the country's southern ones, run through rock masses with a high level of salts, which does not allow the direct use of water even for irrigation.

Failure to comply with measures of water protection makes this resource vulnerable, jeopardizing the human life and health, as well as the species in the country's flora and fauna. The state is responsible for ensuring the needed quality and quantity of water for population, it must be committed to reduce the degradation of aquatic environment, so as to maintain and improve its abilities of life production and support.

2.2.2. REGULATORY FRAMEWORK APPLICABLE TO WATER RESOURCES

As water resources are scarcer than the demand for water, as population grows and risks of water resource loss are high, there is an increasing need to create and legislate a mechanism for protecting and controlling the deterioration of water quality.

At European level, the concerns for water resource protection that arose in 1970 led to the adoption of the Directive 2000/60/EC of the European Parliament and Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000), which addressed the protection of water resources and assurance of their environmental quality in an integrated manner, based on ecosystem concept: the legal protection of aquatic ecosystems in terms of water quality and quantity, as well as their role as natural habitats.

At national level, the strengthening and development of the legislation on environmental protection has been strongly determined by a range of external factors conditioned by the objective processes of globalization and internationalization of environmental issues. In this sense, the legal approximation to international and European regulations represents real progress in developing the national legislation on environmental protection. The development of the regulatory framework on water resource protection, started with the adoption of Law 1515/1993. Thus, Article 44 of Law 1515/1993, establishes the protection scope over the whole water environment in the Republic of Moldova: groundwater with its biocenoses, surface water (watercourses, natural lakes and reservoirs, wet areas related to them) along with their natural resources, specific biocenoses

and sanitary and protected water areas. In addition to Law 1515/1993, there is several regulatory documents on water protection in the Republic of Moldova, which set out rules for water security and its rational use:

- *Law 440/1995 on water and river basin protection areas and riparian strips* regulates the creation of protected water areas and riparian strips for the protection of rivers and water basins, the regime of their use and protection.
- *Law 149/2006 on fishery fund, fisheries and fish farming* regulates the manner and conditions for creating and protecting the fishery fund, reproduction, growth and acquirement of hydrobionts, improvement of fish aquatic objectives and development of fish farming and establishes activity principles of public authorities empowered to manage the water biological resources.
- *Law 303/2013 on public water supply and sewerage service* regulates: a) the delivery of public water supply and sewerage service; b) use, maintenance, expansion and operation of public water supply and sewerage systems; c) establishment and approval of regulated fees for public water supply and sewerage service; d) security and reliability in water supply to consumers; e) protection of the rights of consumers of the public water supply and sewerage service; f) guaranteed equal access for all individuals and legal entities to the public water supply and sewerage service under contractual conditions and in compliance with the regulatory documents. This law sets out the powers of the central and local public authorities in the field of public water supply and sewerage service, the regulatory authority, as well as the rights and obligations of consumers and operators providing public water supply and sewerage service in localities, other stipulations related to the provision of public water supply and sewerage service.
- *Law 192/2019 on quality of drinking water* establishes the legal framework regarding the quality of drinking water, as well as measures taken by authorities responsible for ensuring compliance of drinking water quality.
- *Water Law No 272/2011* regulates the management and protection of surface and underground water, including measures to prevent and combat floods, erosion and measures against drought and desertification, activities that have an impact on surface and underground water, as well as the water intake and use, the discharge of wastewater and pollutants and other activities that could cause damage to water quality.

Once Law No 272/2011 was approved, a series of regulatory documents on protection and management of water resources were developed, such as:

- **Government Decision 433/2012** approving the Regulation on protection dams against floods;
- **Government Decision 775/2013** on the borders of the districts of basins and sub-basins and special maps in which they are determined;
- **Government Decision 802/2013** approving the Regulation on the conditions for wastewater discharge into water bodies;
- **Government Decision 835/2013** approving the Regulation on the record and reporting of wastewater;
- **Government Decision 836/2013** approving the Regulation on the prevention of water pollution resulted from agricultural activities;
- **Government Decision 867/2013** approving the Standard Regulation on the establishment and operation of the River Basin District Committee;
- **Government Decision 881/2013** approving the Methodology on the identification, delimitation and classification of water bodies;
- **Government Decision 887/2013** approving the Regulation on the management of flood risks;
- **Government Decision 890/2013** approving the Regulation on the requirements regarding the quality of environment for surface water;
- **Government Decision 894/2013** approving the Regulation on the organization and operation of the one-stop shop in the field of environmental permit for the special use of water;

- **Government Decision 931/2013** approving the Regulation on the requirements regarding the groundwater quality;
- **Government Decision 932/2013** approving the Regulation on the systematic monitoring and record of surface and underground waters;
- **Government Decision 949/2013** approving the Regulation on the sanitary protection areas of the water intake;
- **Government Decision 950 of 950/2013** approving the Regulation on the requirements for collection, treatment and discharge of wastewater in the sewerage system and/or in water bodies for urban and rural localities;
- **Government Decision 977/2016** approving the Standard Regulation on the exploitation of reservoirs/ponds;
- **Government Decision 506/2019** approving the Framework Procedure on the organization, execution and award of delegation contract of the management of public water supply and sewerage service.

2.2.3 LIABILITY FOR VIOLATING THE LEGISLATION ON WATER RESOURCE PROTECTION

Contravention liability

The violation of the legal provisions on the water resource protection entails contravention, civil or criminal liability. The contravention liability in environmental law intervenes when the actions of environmental degradation represent a relatively low social danger, being included in the contravention category by RM CvC 2018/2008. The contraventions in the field of water resource protection are shown in Table 4.

Table 4. Contraventions in the field of water resource protection

Article	Description
Article 109. Violations of the water protection regime	(1)Violations of the water protection regime resulting in water pollution, soil erosion or other harmful phenomena *shall be sanctioned for individuals by a fine of 60 to 120 conventional units or by unpaid community work for 10 to 40 hours, by a fine of 600 to 800 conventional units for legal entities.* (2) Commissioning the construction of business facilities, apartment blocks or other types of real estate without the equipment and installations for preventing water pollution and its harmful impact *shall be sanctioned for individuals by a fine of 24 to 30 conventional units or with unpaid community work for 20 to 40 hours, by a fine or 42 to 90 conventional units for responsible person, by a fine of 240 to 300 conventional units for legal entities.* (3) Washing vehicles, equipment and packaging material in fresh water sources or near them or in other unauthorized places *shall be sanctioned for individuals by a fine of 12 to 30 conventional units or by unpaid community work for 40 to 60 hours, by a fine of 60 to 120 conventional units for legal entities with or without deprivation, in both cases, of the right to carry out certain activities for a period of 3 months to 1 year.*

Article	Description
	(3[1]) The direct or indirect acceptance, through default acts or omissions, or the provision of services of washing vehicles, equipment and packaging material in fresh water sources or near them or in other unauthorized places *shall be sanctioned for individuals by a fine of 20 to 50 conventional units or by unpaid community work for 40 to 60 hours, by a fine of 100 to 200 conventional units for legal entities with or without deprivation, in both cases, of the right to carry out a certain activity for a period of 3 months to 1 year.* (4) The failure to comply with the size and regime of river, water basins and riverbed protection areas and riparian buffer strips *shall be sanctioned by a fine of 6 to 18 conventional units for individuals and by a fine of 60 to 120 conventional units for legal entities.* (5) The failure to observe the boundaries and regulations for forest belts for water protection *shall be sanctioned by a fine of 6 to 18 conventional units for individuals and by a fine of 60 to 120 conventional units for legal entities.* (6) The failure of the captain or of another officer of a vessel to observe the obligations stipulated in legislation regarding registering in documents on board any procedures using substances that are harmful to people and to the living resources of the sea or using mixtures that contain such substances beyond established standards or entering false information about such procedures in the documents on board or illegally refusing to present the documents to responsible persons *shall be sanctioned by a fine of 30 to 42 conventional units or by unpaid community work for 40 to 60 hours.*
Article 110. Violations of rules for water use	(1) Collecting and using water in violation of the established rules and using drinking water for industrial purposes *shall be sanctioned by a fine of 12 to 24 conventional units for individuals or by unpaid community work for 20 to 40 hours and by a fine of 120 to 240 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year.* (2) Using water units without a special authorization for their use *shall be sanctioned by a fine of 24 to 30 conventional units for individuals and by a fine of 240 to 300 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year.* (3) The illegal obstruction of other water consumers to set up and/or use a water intake and mobile installations under Water Law No 272/2011 *shall be sanctioned by a fine of 40 to 60 conventional units for individuals, and by a fine of 300 to 500 conventional units for legal entities with or without the deprivation of the right to carry out a certain activity for a period of 3 months to 1 year.*

Article	Description
	(4) Owning a reservoir or a pond without having a regulation on exploitation of dams, ponds and reservoirs *shall be sanctioned by a fine of 40 to 60 conventional units for individuals and by a fine of 300 to 500 conventional units for legal entities with or without the deprivation in both cases of the right to carry out a certain activity for a period of 3 months to 1 year.* (5) The water discharge by the owner of the reservoir or pond for fish technological purposes, except the cases related to detection or eradication of fish diseases, *shall be sanctioned by a fine of 40 to 60 conventional units for individuals and by a fine of 300 to 500 conventional units for legal entities with or without the deprivation of the right to carry out a certain activity for a period of 3 months to 1 year.*
Article 111. Failure to observe the rules and instructions on the use of hydro technology, and of water management and protection facilities, installations and measuring devices	The failure to observe the rules and instructions on the use of hydro technology and of water management and protection facilities, installations and measuring devices *shall be sanctioned by a fine of 6 to 12 conventional units for individuals, by a fine of 24 to 30 conventional units for responsible persons, and by a fine of 60 to 120 conventional units for legal entities.*
Article 112. Damaging hydro technology and water management and protection facilities and installations	Damaging hydro technology and water management and protection facilities and installations, including networks and installations of drinking water supply systems *shall be sanctioned by a fine of 12 to 18 conventional units for individuals and by a fine of 120 to 240 conventional units for legal entities.*
Article 113. Violations of rules for carrying out an economic activity in protected water areas	(1) The unauthorized application of pesticides and fertilizers within 300 meters from the bank of a river *shall be sanctioned by a fine of 18 to 24 conventional units for individuals and by a fine of 180 to 240 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year.* (2) The placement in protected water areas of stocks of fertilizers, pesticides or oil products; the construction of facilities for preparing chemical solutions, gas stations or catchments for residual water from livestock farms and facilities or car servicing and washing units; distributing plots of land in such areas for stocking wastes of any origin and the unauthorized construction of sewerage installations or of catchments and installations for cleaning residual waters *shall be sanctioned by a fine of 18 to 30 conventional units for individuals and by a fine of 180 to 240 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period from 3 months to 1 year.* (3) The unauthorized filling of river meadows and dry riverbeds; building structures for regulating river courses; extracting useful substances and constructing or installing communications in protected water areas *shall be sanctioned by a fine of 24 to 30 conventional units for individuals and by a fine of 180 to 240 conventional units for legal entities.*

Article	Description
	(4) Land development and establishing animal or bird sanctuaries or camp sites inside the boundaries of riverbanks designated for water protection *shall be sanctioned by a fine of 18 to 30 conventional units for individuals and by a fine of 180 to 240 conventional units for legal entities.* (5) Discharging into surface water and into irrigation and drainage channels untreated wastewater, water polluted with radioactive substances, water contaminated with pathogenic germs or with parasites, oil products or residues of other pollutants *shall be sanctioned by a fine of 18 to 30 conventional units for individuals and by a fine of 180 to 300 conventional units for legal entities.* (6) Economic activities that have an impact on the environment carried out by companies without the means for keeping track of their quantity and quality, of monitoring water discharge or for preventing water pollution and its destructive effects *shall be sanctioned by a fine of 18 to 30 conventional units for individuals and by a fine of 180 to 300 conventional units for legal entities.* (7) Illegal discharge of radioactive substances into surface and sewerage water, and into irrigation and drainage channels *shall be sanctioned by a fine of 150 to 300 conventional units for individuals, by a fine of 300 to 900 conventional units for responsible persons, and by a fine of 900 to 1500 conventional units for legal entities.*

According to public data, during 2018, IEP documented around 446 contraventions on the violation of rules regarding the use of water, hydrotechnical constructions, protected water areas etc., based on Articles 109, 110, 111, 112, 113 of RM CvC. During 2019, to protect water resources, IEP detected about 577 contraventions on the violation of rules regarding the use of water, hydrotechnical constructions, protected water areas etc., based on Articles 109, 110, 111, 112, 113 of RM CvC. During 2020, IEP found around 517 contraventions related to the violation of water protection regime, breach of rules for water uses etc., in compliance with the provisions of Articles 109, 110, 111, 112, 113 of RM CvC.

Criminal liability

According to the legislation applicable to reports on water resource protection, the legislator provided not only for contravention liability, but also for criminal liability. Unlike contraventions, the environmental crimes represent pollution acts with significant social danger, committed in such circumstances that, in compliance with the criminal law, they constitute crimes[22]. Thus, Article 229 of Criminal Code No 985/2002 criminalizes the act of water pollution.

Table 5. Article 229 RM CC

Article	Description
Article 229. Water Pollution	*The infection or other contamination of surface or underground waters with used waters or other waste from industrial, agricultural, communal or other enterprises, institutions, or organizations when causing large-scale damage to the animal or vegetal world; to fishery, forestry, or agriculture; or to the health of the population, or causing the death of a person* shall be punished by a fine in the amount of 650 to 1150 conventional units or by imprisonment for up to 5 years, whereas a legal entity shall be punished by a fine in the amount of 2000 to 4000 conventional units with the deprivation of the right to practice certain activities.

22 Ernest Lupan, Environmental Law, vol. II, Lumina Lex Publishing House, Bucharest, 1996.

Given the importance and value of water resources for humans, we find that water resource pollution threatens the environmental interests of the entire society, violating the human right to live in a healthy environment.

2.2.4. PROBLEMATIC ASPECTS REGARDING WATER RESOURCES MANAGEMENT

Water pollution is a phenomenon difficult to control, sometimes invisible, which requires an increased attention. According to Law No 272/2011, *water pollution* means the direct or indirect introduction, because of a human activity, of substances or heat into the air, in water or soil which may present risks to human health or to the quality of water or terrestrial ecosystems, which directly dependent on water ecosystems, which leads to the deterioration of material goods or which harms or adversely affects services and other legal uses of the environment. Several problems have been identified in the process of water resources management, among which we mention:

A. Carrying out the entrepreneurial activity in the absence of the Environmental Permit for the special use of water

The special use of water is carried out because of the environmental permit for the special use of water, issued in compliance with Law No 272/2011. The environmental permit for the special use of water is a permissive act that gives to the holder the right to carry out the activity of special use of water under certain conditions for a determined period. The procedure for issuing the Environmental Permit for the special use of water is regulated in the R*egulation on the organization and operation of the one-stop shop in the field of the environmental permit for the special use of water approved by Government Decision No 894/2013*. The Environmental Permit for the special use of water is issued by the Environmental Agency, at the request of the applicant.

The importance of the Environmental Permit for the special use of water lies in the fact that it sets out a number of a general and special conditions that the beneficiary must respect:

- general conditions: rational use of water for the specified purpose; prevention of water pollution; installation of equipment for measuring the volume of water used; providing information on the volume of water used; respect the discharge rules; ensuring the sanitary protection areas of the water source; respect the hygienic water quality requirements.
- special conditions regarding ways how the water will be used; seasonal or temporal variations in water use; taking measures to reduce the effects of pollution and taking other measures to protect the environment; efficient water management and protection.

The mechanism for authorizing the special use of water allows inspection bodies to verify the activity of the beneficiaries from the perspective of observing the conditions pre-established by them. If the holder of the Environmental Permit for the special use of water does not comply with the authorization terms, the MA or IEP shall notify the holder of the irregularities found, the ways how to remedy all identified deficiencies, the deadline by which the holder must remedy these deficiencies where appropriate and initiate the procedure for suspension or withdrawal of the authorization which will have the effect of interrupting the authorized type of activity.

Despite legal regulations, the Republic of Moldova is still affected by the problem of economic activity performed without environmental permits for special use of water, which obliges operators to take measures to protect water against pollution. Thus, according to IEP data, for the period 2002-2016, contrary to the provisions of Article 23 of Law No 272/2011, do not hold a Special Authorization for water use 27 operators (Cahul, Cantemir, Anenii-Noi, Cimișlia, Dondușeni, Floresti, Soldanesti, Taraclia, Ungheni, Balti), the mandatory document for capturing water from surface sources and groundwater for the supply of water for human consumption and the discharge of wastewater.

Most economic operators work without a permit.

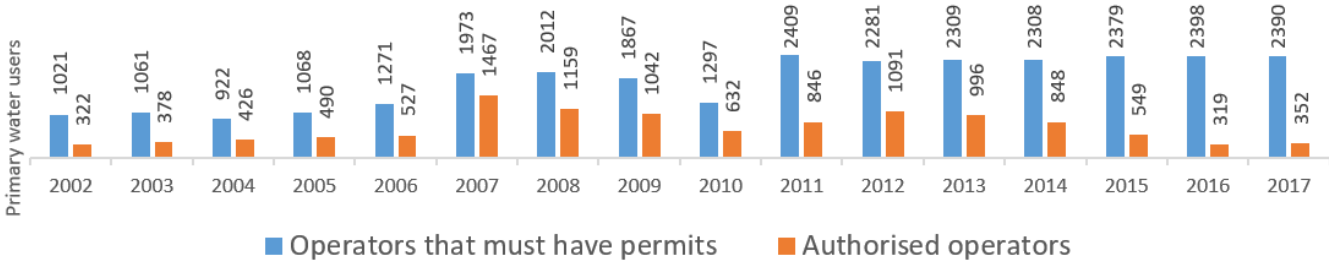

Figure 4. Data on holders of permits for special use of water (2002-2016)

According to the data submitted by IEP, in 2017, 2390 operators were supposed to have a permit for special use of water, only 352 economic operators have it (see Figure 4). The lack of an environmental permit for the special use of water is not only a violation of Law No 272/2011, but also a neglect of the limited water resources in the Republic of Moldova.

Case study 2. Nîrnova and Ciorescu Wastewater Treatment Plants

The problem of special water use without environmental permits for special water use was perpetuated during 2018-2020. Thus, IEP inspections found that contrary to Articles 22 and 25 of Law No 272/2011, Nisporeni Wastewater Treatment Plant operated without an *environmental permit*. Nisporeni IEP found that insufficiently treated water is gravitationally drained into 2 biological lakes, then discharged into the land near the Nîrnova River. The specialist of the Reference Laboratory of the MA found values above the limit values specified in Annex 1 of the Government Decision No 950/2013, based on which, IEP found the violation of Article 111 of the CCv. of the Republic of Moldova and set a fine in this regard.

A similar situation was established at the Ciorescu Wastewater Treatment Plant. Thus, decision makers of the wastewater treatment plant, on 17 October 2019, contrary to legal provisions and without *an Environmental Permit* for special use of water, admitted violation of the technological treatment process, resulting in pollution of surface water with waste of the municipal enterprise, or, according to the Test Report of the water samples, the wastewater leaks from the Ciorescu treatment plant worsened the water quality of the Ichel river, by increasing the concentration of pollutants downstream of the treatment plant compared to the upstream, as follows: CCO - 1.42 times, CBO5 - 5.4 times, MS - 1.67 times, N-NH4+ (ammonia nitrogen) - 1.42 times, P_{total} – 1.42 times, detergents - 1.3 times, and the damage caused to the environment as a result of violating the legislation is MDL 551,063.01.

Case study 3. Cricova Wastewater discharge

Another case using water without an environmental permit for the special use of water was found by the inspection bodies in 2019 in Cricova, where a treatment plant, contrary to Articles 1, 14(a), (d) and (f) of Law 303/2013 on Public Water Supply and Sewerage Service, which obliges them to strictly monitor the quality of wastewater received through public sewerage systems, in accordance with the hygienic-sanitary norms in force and the maximum permissible concentrations of pollutants in water used for their discharge into the public sewerage network, in the treatment plant or in receiving waters, Article 45 of *Law 1515/1993* according to which in order to protect water resources it is forbidden to discharge into surface waters, in irrigation and drainage channels of untreated wastewater, point 25 of the *Regulation on the requirements for collection, treatment and discharge of wastewater into the sewerage system and or in emissaries for urban and rural localities*, approved by GD 950/2013 according to which wastewater discharged into emissaries must not

contain concentrations of pollutants with a high degree of toxicity than those provided in Annex 2 to Regulation mentioned above, as well as substances prohibited by specialized studies; concentrations of suspended solids above the admitted limit, which could cause deposits in minor riverbeds or lake basins; substances that may lead to increased turbidity, foaming or alteration of the organoleptic properties of the receiving water compared to their natural state, without *an Environmental Permit* for the special use of water, have admitted violation of the technological process of treatment, resulting in surface water pollution with waste from the municipal enterprise, or, according to the Water Test Report, wastewater from the treatment plant has worsened the water quality of the Ichel River by increasing the concentration of pollutants downstream of the treatment plant from the upstream, as it follows: CCO - 7.18 times, CBO5 - 10.56 times, MS - 11.38 times, N-NH4+ (ammonia nitrogen) - 45.1 times, P_{total} – 5.27 times, detergents - 5.43 times, and the damage caused to the environment as a result of violating the legislation is MDL 800.

Not less alarming situation was also found following the inspection of the accumulation lakes and ponds. Thus, in order to implement the Action Plan for 2018 - 2019 on the implementation of Government Decision No 977/2016 approving the Standard Regulation for the operation of accumulation lakes/ponds by the IEP subdivisions, 504 accumulation lakes/ponds were inspected, of which the mode of being used: general - 260; fish farming - 191; irrigation - 53, only 51 water basins hold special water use permit.

B. Failure to comply with the procedure for wastewater treatment and discharge in urban and rural areas

Wastewater discharge is an activity subject to authorization. Given that the activity of wastewater discharge is one with an increased risk of pollution of water resources, the environmental permit for the special use of water involving the discharge of wastewater is a complex and detailed including an additional number of conditions provided in Article 42 of Law No 272/2011. The Environmental Permit for the special use of water involving the discharge of wastewater could specify the deadline for the progressive reduction of the quantity and/or concentration of pollutants that may be discharged. Therewith, when issuing an Environmental Permit for the special use of water involving the discharge of wastewater, the MA must ensure that the loads and concentrations of pollutants in wastewater, as well as the loading of residual heat are at the level that can be achieved by applying the best available techniques (BAT). In order to prevent water pollution and improve its quality, the conditions for the discharge of wastewater provided for in the Environmental Permit for the special use of water are reviewed every 3 years.

The requirements for the operation of wastewater collection systems in urban areas and for the operation of wastewater treatment plants are laid down in the *Regulation on the requirements for the collection, treatment, and discharge of wastewater into the sewerage system and/or water bodies for urban and rural areas*, approved by Government Decision No 950/2013[23]. The discharge of wastewater into sewers or treatment plants is based on the written consent given by the public service operator who manages and operates the sewerage network and the treatment plant, as well as the contract for connection and use of public water supply and sewerage services, concluded with it. The conditions for the discharge of sewage from an industrial platform into the sewerage network shall be determined by the operator who manages and operates the sewerage network and the treatment plant, considering design loads and flows of the treatment plant managed by the operator and in accordance with the above-mentioned Regulation.

In order to regulate the conditions for the discharge, introduction of specific substances into a body of surface water, into a body of groundwater or into groundwater, *the Regulation on the conditions for the discharge of wastewater into bodies of water* has been drawn up, approved by Government Decision No 802/2013[24].

23 Government Decision No 950 of 25.11.2013 approving the Regulation on the requirements for collection, treatment and discharge of wastewater in the sewerage system and/or in water bodies for urban and rural localities, Published: 06.12.2013, Official Gazette, No 284-289.

24 Decision No 802 of 09.10.2013 approving the Regulation on the conditions for the discharge of wastewater into water bodies. Published: 01.11.2013, Official Gazette, No 243-247.

According to the Government Decision No 950/2013, wastewater from medical and veterinary units, curative or prophylactic, from laboratories and medical and veterinary research institutions, slaughtering enterprises, as well as from any kind of enterprises and institutions, the activity of which that can produce contamination with pathogens, microorganisms, viruses, helminth eggs - shall be discharged into the sewers of localities and treatment plants only if all disinfection measures have been taken, according to the provisions of the regulatory documents in force.

The discharge of treated wastewater into the network of drainage channels, irrigation or agricultural land shall be made only after an appropriate treatment and with the approval of their administrator/holder based on the authorization, as follows:

- when canal water is used for crop irrigation, the limits of quality indicators are also correlated with the standard for water quality for crop irrigation;
- when the wastewater is discharged into a drainage channel that discharges the water into an emissary, the limits of the quality indicators will be in accordance with the legal provisions.

For communities undergoing treatment plants or their extensions, provided for by phasing programs, the competent authority shall establish other conditions for evacuation during the program, until its objectives are met, considering the provisions of this Regulation. If the communities do not have a sewage treatment plant, the conditions for the discharge of wastewater into the sewerage networks of the communities shall be established by the operators who manage and operate the sewerage network system, based on the provisions of the *Regulation on collection requirements, wastewater treatment and discharge in the sewerage system and/or in water bodies for urban and rural communities* and depending on the final point of discharge.

The issue of water pollution from wastewater discharges is even more pressing as the situation is alarming of sewage treatment plants in the Republic of Moldova. According to the data reported by IEP in 2017 from their total number of 166 units, only 126 have project documentation and only for 17 stations were established the norms of limited admissible discharges. Of the existing ones, the wastewater treatment plants, both in urban and rural communities, are used and partially destroyed.

It is alarming that only 5 of the functional treatment plants (Cantemir - 2, Floresti - 1, Ocnita - 1, Orhei - 1) treat wastewater up to the normative parameters, 142 stations - perform insufficient treatment and 19 stations - partial treatment, which generates the discharge into the waters of the tributaries and directly into the Dniester and Prut rivers of municipal wastewater and liquid waste resulting from the activity of economic operators with increased concentrations of pollutants.

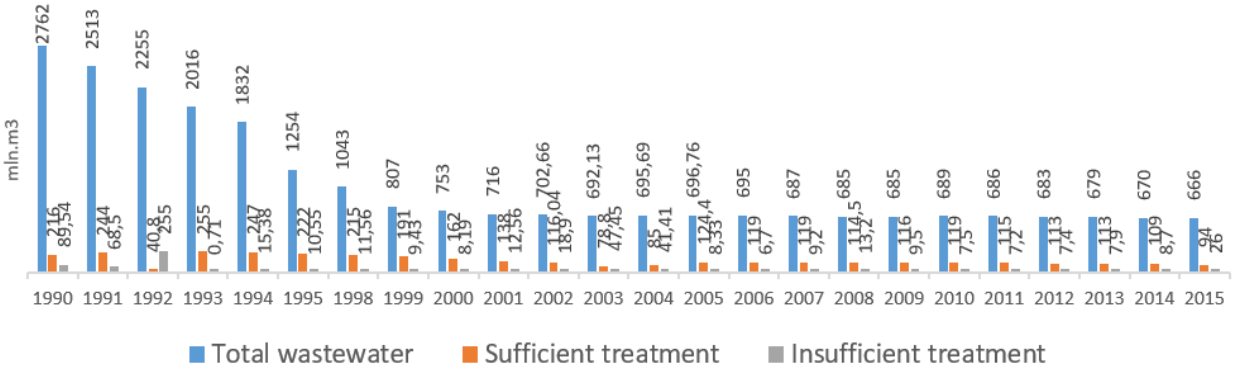

Figure 5. The volume of wastewater discharged into surface basins during 2002-2014, in mil.m^3

The diagram shows that the volume of wastewater discharged into surface basins during 2002-2014 decreased from 696 million m3 to 666 million m3, due to insufficient operation of wastewater treatment plants the number of pollutants discharged in organized sources, as well as the maximum allowable concentration allowed by the regulations in force, is maintained above the limit allowed by the environmental authority. The volume of wastewater, insufficiently treated, discharged into water facilities increased during this period from 18.9 million m^3 to 26.0 million m^3, and the volume of untreated water increased from 0.5 million m^3 to 2.0 million m^3.

Local public authorities have a crucial role in ensuring proper operation of treatment plants. According to Article 8(1)(b) of Law No 303/2013, they have the obligation to establish, organize, coordinate, monitor and control the operation of the public water supply and sewerage service, in accordance with the law. Unfortunately, the absence of specialized staff and financial resources also affects the condition of existing treatment plants in the locality.

Then, the operators, regardless of the management method adopted or the legal status, the form of organization, the nature of the capital, the type of property or the country of origin, also have a set of duties provided in Article 14 of Law No 303/2013, the observance of which ensures the protection of the environment.

Failure or unsatisfactory performance of the tasks listed above may have serious consequences for the environment, including biodiversity and human health. An example of this is the case study S.A. Apă Canal Chișinău and Î.M. ‚Zernoff S.R.L.".

Case study 4. S.A. Apă-Canal Chișinău and Î.M. ‚Zernoff"

By the sentence issued by the Chisinau Court (Buiucani Office) of 6 March 2020, the former director of S.A. Apa Canal Chisinau was convicted of committing the crime provided by Article 229 CP of the Republic of Moldova. In fact, during 2013-2016, a public person with management responsibilities at SA 'Apa-Canal Chisinau', having according to the job description the obligation to ensure optimization and implementation of work processes in the field of contracting, recording and invoicing of services provided, as well as to provide public services on behalf of the state or to carry out activities of public interest, received the address of Î.M. Zernoff S.R.L. by which the company requests the conclusion of the contract for the pre-treatment of wastewater, in connection with the modernization of the technological process, without requesting the modification of the clauses of the contract in force at that time. Note that this contradicts Article 47(b) of Law No 1515/1993, according to which the economic operators that discharge wastewater are obliged to ensure the pre-treatment of wastewater according to relevant standards, before their discharge into the sewerage network of the communities.

At the same time, according to points 4.2.11 and 6.3.1 of *the Regulation on the organization and operation of public water supply and sewerage services in Chisinau municipality*, approved by the Decision of the Chisinau Municipal Council No 5/4 of 25.03.2008, the evacuation sewage in the sewerage network and the conclusion of the given contract is allowed only if it does not degrade the constructions and installations of the sewerage network of the treatment plant and does not disrupt the treatment processes in the station, ensuring compliance with quality requirements for wastewater disposal into receiving waters. Moreover, concluding such a contract is possible only if the Wastewater Treatment Plant has the necessary reserves to treat the wastewater, considering the respective indicators and not harming the normal operation of the treatment networks and facilities and ensuring compliance with the conditions quality standards established for the discharge of treated wastewater into receiving waters. Neglecting the conditions imposed by law and knowing with certainty that the Chisinau Municipal Wastewater Treatment Plant is in a deplorable technical condition, with 2 times lower actual wastewater treatment capacity than designed and respectively cannot process quantitatively and qualitatively the volumes of production waste (remnants) transported by Î.M. ‚Zernoff" S.R.L., the responsible person at SA "Apa-Canal Chisinau" concluded a contract for pre-treatment of wastewater. Though the quantitative and qualitative parameters of the delivered remnants were constantly increasing, the conditions of the contract were amended by decreasing the tariff coefficient, which generated a damage of MDL 92 million for SA 'Apa-Canal Chisinau', and last but not least harmed significantly environment.

According to the Technical-Scientific Finding Report No 342 of 02.12.2016, carried out by the Institute of Ecology and Geography of the Academy of Sciences of Moldova, during 2012-2016 Î.M. ‚Zernoff" SRL had continuously discharged wastewater exceeding the maximum allowable concentrations into Chisinau Municipal Wastewater Treatment Plant. As a result of these actions, in the discharged water from the Chisinau sewage treatment plant in the Bic River overflows of C.M.A. 3.1 times for CCO-Cr, 7.0 times for CBO5 and 12.3 times for NH4 +, which resulted in pollution of surface waters and considerable damage to the animal, plant and fishery resources of the Bic River, right tributary of the Dniester River. Note that according to the conclusions of the Institute of Ecology and Geography, wastewater resulting from the production of ethyl alcohol from cereals, may not be introduced into the cycle of municipal wastewater treatment plant without pre-treatment, because its chemical parameters exceed several times the allowed concentration at discharge into the system, according to the trial reports and recommendations submitted to Î.M. ‚Zernoff" SRL by SA ‚Apa Canal Chișinău" in 2012-2016. As a result, insufficiently treated water was discharged into the Bic River, which according to the assessment of the IEP Ecological Investigation Center No 70 / 12-3 of 06.10.2016, caused considerable damage to the animal, plant and fishery resources of the Bic River, right tributary of the Dniester River, worth MDL 47 5 ***** 377.

In addition, we would like to mention that as a result of carrying out inspections during 2020, regarding the violation of ecological requirements for the recovery of damages caused to water resources, IEP calculated damages and submitted claims in the total amount of MDL 4,269,255, among which:

- The inspection at Î.M. 'Apa – Canal Strășeni' on the functionality of the municipal wastewater pumping station and the way of wastewater collection found that the wastewater is pumped into the canal near the station, which then flows directly into the natural receiver, Bâc riverbed, in a volume of 868 m3 / day on an area of about 8 - 10 ha, the Straseni - Vatra collector being defective. The discharge of untreated wastewater from the station has a negative impact on the water quality of the Bâc River, manifested by the increase in pollutant concentrations, for which the damage caused to the environment in the amount of MDL 4,005,969 was assessed and calculated.
- The inspection at the Biological Treatment Plant (BTP) Budești, managed by AS 'Water-Canal Chisinau', found that the discharge of untreated wastewater from the station, have a negative impact on water quality Frumușica River, manifested by increasing pollutant concentrations. The damage caused to the environment was assessed at MDL 137,780.04.

The absence of pre-treatment plants for economic operators generating liquid waste is a pressing problem in the Republic of Moldova. Although Article 47 of Law no 1515/1993 on Environmental Protection obliges economic operators of any form of ownership, which use water resources and discharge wastewater, to ensure the pre-treatment of wastewater to the required standards before their discharge into the local sewerage network, the absence of wastewater pre-treatment plants significantly affects the condition of environmental components.

C. Failure to comply with the sanitary protection area of the water source

Law No 440/1995 on water and river basin protection areas and riparian strips[25] *regulates the creation of protected water areas and riparian strips for the protection of rivers and water basins, as well as establishes the regime of their use and protection. All legal entities and individuals, including foreigners, are covered by it.*

Water protection areas are established in order to:

a. protect water bodies from the harmful effects of present or future public water supply;
b. protect water intended for capture for drinking water supply;
c. replenish the groundwater;
d. prevent harmful effects caused by rainwater runoff, erosion, introduction of soil components, fertilizers, pesticides, and herbicides into water bodies.

To ensure effective protection in water protection areas, certain activities are prohibited or regulated under certain conditions in accordance with the law.

We mention the fact that the land use regime in the water protection area falls under the incidence of Article 13 of Law No 440/1995. According to Article 6 of Law No 440/1995, along the banks of rivers and water basins, water protection areas are established with a width of at least 500 *meters* from the edge of the riparian slope of the riverbed on the banks, but not further from the divide. For streams (with permanent or temporary water flow) water protection areas should be established along the banks, with a width of at least 15 *meters* on both banks. The width of the water protection areas of the Dniester, Prut and Danube rivers is at least 1000 *meters*.

To determine the ownership regime of the lands in the water protection area, it is necessary to examine the provisions of Law No 29/2018. Thus, according to Article 9(2)(b) of Law No 29/2018: "surface water bodies, located on the territory of 2 or more districts or on the territory of a single district and intended for the protection of the energy system, the needs of the transport and other state services, the lands of border water bodies, the lands of the fund public property of the state, i*ncluding the lands of the riparian water protection strips and*

25 Law no 440 of 27.04.1995 water and river basin protection areas and riparian strips . Published: 03.08.1995 in the Official Gazette, no. 43. Date of entry into force : 03.08.1995.

sanitary areas, flood protection dams, irrigation and drainage systems and other hydrotechnical constructions are public property of the state. ' At the same time, Article 5 of the above-mentioned law expressly provides that: "*Public domain goods form the exclusive object of public property of the state or of the administrative-territorial units and are inalienable, imperceptible, and imprescriptible, their civil circuit being limited under the law.* Thus, once it is established that the land is located in the protection area of the river, it cannot be unconditionally transferred from public to private ownership.

Contrary to the legal provisions, in the Republic of Moldova there are cases in which the local public administration authorities decide to sell the public land located inside the riparian buffer strip to economic operators. Eloquent example of this includes the Vatra local public authority and other public institutions. According to the information of the Prosecutor's Office, the criminal investigation started on 09.07.2018 based on Article 328(3)(d) and Article 335(11) CP of the Republic of Moldova established that representatives of Vatra Mayor's Office, representatives of some private providers of cadastral and geodetic services and representatives of Chisinau Territorial Cadastral Service, during 2001-2016, by mutual agreement implemented a criminal scheme resulting in depriving the state of 25.5 ha of public property land, for common use, from the water fund, riparian protection strip of Ghidighici Lake, generating losses of MDL 15,203,105 due to their exclusion from the agricultural circuit.

2.2.9. STATISTICS ON VIOLATIONS IN THE FIELD OF WATER PROTECTION DURING 2017-2021

In accordance with the Regulation on the Organization and Operation of the Inspectorate for Environmental Protection, approved by Government Decision No 548/2018, IEP performs state supervision and inspection in the field of environmental protection and use of natural resources. Table 1 reflects the results of the supervision and inspection activity carried out by IEP in the field of water resources protection for the period 2017-2020, according to the annual reports published on its official website *http://ipm.gov.md/ro/rapoarte-anuale.*

Table 6. Results of the IEP supervision and inspection activity

Supervision and inspection of water resources by the Inspectorate for Environmental Protection				
Year Activity	**2017**	**2018**	**2019**	**2020**
Number of companies and objects that pose a danger to water resources and may affect their quality	862	539	690	----
Number of inspection reports	------	751	719	323
Number of found violations of laws and legislations	899	467	667	476
Fines	MDL 1,659,200	MDL 779,000	MDL 1,109,100	MDL 1,274,250
IEP inspected the breaches of environmental requirements and, in order to recover the harm caused to water, calculated damages totaling:	6 claims submitted in the amount of MDL 70,509	MDL 47,927	MDL 42,790,383.65	-----

We notice that the number of inspections performed by the Inspectorate for Environmental Protection during 2018-2020 is decreasing, thus, if 751 inspections were carried out in 2018, in 2020 they decreased to 323 inspections. However, the amount of fines remains large, amounting to MDL 1,274,250 for 2020.

According to the data provided by IEP, the most frequent violations in the field of water protection include:

- Carrying out the entrepreneurial activity without an environmental permit for the special use of water, in accordance with Article 23(1) of Law No 272/2011;
- Failure to comply with the conditions for rational use of water stated in the environmental permit for the special use of water, in accordance with Article 28(2)(a) of Law No 272/2011;
- Failure to carry out measures to prevent water pollution in accordance with Article 28(2)(b) of Law No 272/2011 on Water;
- Failure to comply with the rules for wastewater discharge and Article 28(2)(e) of Law No 272/2011;
- Failure to comply with the sanitary protection area of the water source in accordance with Article 28(2)(f) of Law No 272/2011;
- Water is not pre-treated according to the relevant standards before their discharge into the sewerage network in line with Article 47(b) of Law No 1515/1993;
- Carrying out the activity without a contract on receiving/transporting wastewater for treatment in the absence of its own system in accordance with Article 25(2)(i) of Law No 272/2011;
- Discharge/storage in surface waters and in their riverbeds or in water protection areas of waste of any nature in accordance with Article 45(b) of Law No 1515/1993;
- Carrying out the activity in the absence of instructions (regulations) for the operation of constructions, management and water protection installations in accordance with Article 32(e) of Law No 1515/1993 and Government Decision No 977/2016.

2.3. INVESTIGATION OF ENVIRONMENTAL CRIMES IN THE FIELD OF WASTE MANAGEMENT RESULTING FROM CONSTRUCTION AND DEMOLITION ACTIVITIES

2.3.1. CONSTRUCTION AND DEMOLITION WASTE: DEFINITIONS AND MANAGEMENT

The waste management policy of the Republic of Moldova provides for the development of the necessary infrastructure and services to adequately protect the environment at global, national, and local level from the effects associated with waste management generated by citizens, businesses and institutions.

All categories of waste regulated according to **Law No 209/2016 on Waste**[26] and classified according to Government Decision No 99/2018 approving the List of wastes[27] are divided into three groups: municipal waste, waste streams regulated according to the principle of extended producer responsibility (EPR) and specific waste streams. Construction and demolition waste falls into the category of specific waste streams.

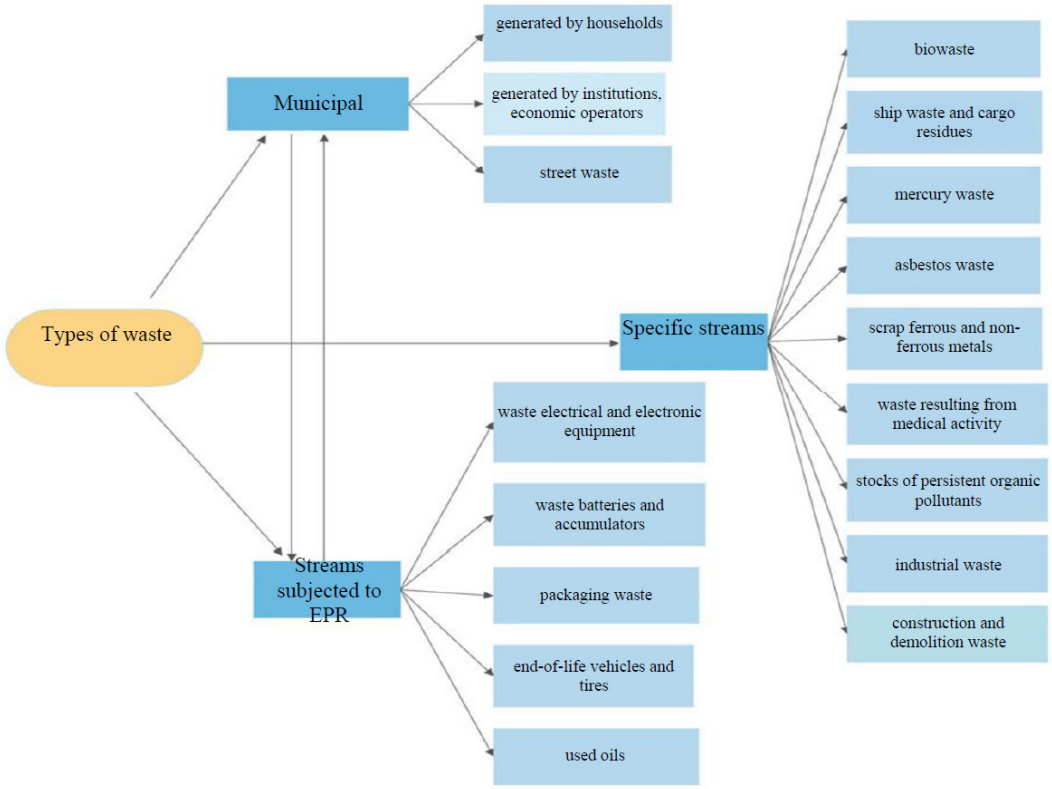

Figure 6. Types of waste

Source: Law No 209/2016 on Waste

Construction and demolition waste (CDW) includes both construction and demolition waste/demolition from the population, most often collected by sanitation operators, as well as construction and demolition waste resulting from construction activities, managed in many cases by those economic operators.

26 https://www.legis.md/cautare/getResults?doc_id=118272&lang=ro
27 https://www.legis.md/cautare/getResults?doc_id=102107&lang=ro

According to the Government Decision No 99/2018 approving the Waste List, 20 categories of waste are established depending on the source of their generation, the following CDWs are listed in Table 7.

Table 7. Classification of demolition and construction waste

Codes	Categories, subcategories, and types of waste
17	**DCONSTRUCTION AND DEMOLITION WASTE (including soil excavated from contaminated sites)**
17 01	**concrete, bricks, tiles and ceramics**
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 06*	mixtures of, or separate fractions of concrete, bricks, tiles, and ceramics containing hazardous substances
17 01 07	mixtures of concrete, bricks, tiles, and ceramics other than those mentioned in 17 01 06
17 02	**wood, glass, and plastic**
17 02 01	wood
17 02 02	glass
17 02 03	plastic
17 02 04*	glass, plastic, and wood containing or contaminated with hazardous substances
17 03	**bituminous mixtures, coal tar and tarred products**
17 03 01*	bituminous mixtures containing coal tar
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 03 03*	coal tar and tarred products
17 04	**metals (including their alloys)**
17 04 01	copper, bronze, brass
17 04 02	aluminum
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 09*	metal waste contaminated with hazardous substances
17 04 10*	cables containing oil, coal tar and other hazardous substances
17 04 11	cables other than those mentioned in 17 04 10
17 05	**soil (including excavated soil from contaminated sites), stones and dredging spoil**
17 05 03*	soil and stones containing hazardous substances
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 05*	dredging spoil containing hazardous substances
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 07*	track ballast containing hazardous substances
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	**insulation materials and asbestos-containing construction materials**
17 06 01*	insulation materials containing asbestos
17 06 03*	other insulation materials consisting of or containing hazardous substances

17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 06 05*	construction materials containing asbestos
17 08	**gypsum-based construction material**
17 08 01*	gypsum-based construction materials contaminated with hazardous substances
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
17 09	**other construction and demolition wastes**
17 09 01*	construction and demolition wastes containing mercury
17 09 02*	construction and demolition wastes containing PCB (for example PCB-containing sealants, PCB-containing resin-based floorings, PCB-containing sealed glazing units, PCB-containing capacitors)
17 09 03*	other construction and demolition wastes (including mixed wastes) containing hazardous substances
17 09 04	mixed construction and demolition waste other than those mentioned in 17 09 01, 17 09 02 and 17 09 03

It is important to mention that the Codes in the list that end with the sign (*) mean that it is marked **as harmful** in accordance with Article 7(5) of Law No 209/2016, unless Article 23 of this law is applicable. Although there is no separate regulation on construction waste management, certain provisions are included in the existing regulatory framework.

Construction waste generation

At the national level, there is no report on the generation of demolition construction waste, although according to the National Bureau of Statistics, over the last 5 years there has been a steady increase in the registration of construction companies, including foreign capital. Construction organizations by forms of property and years.

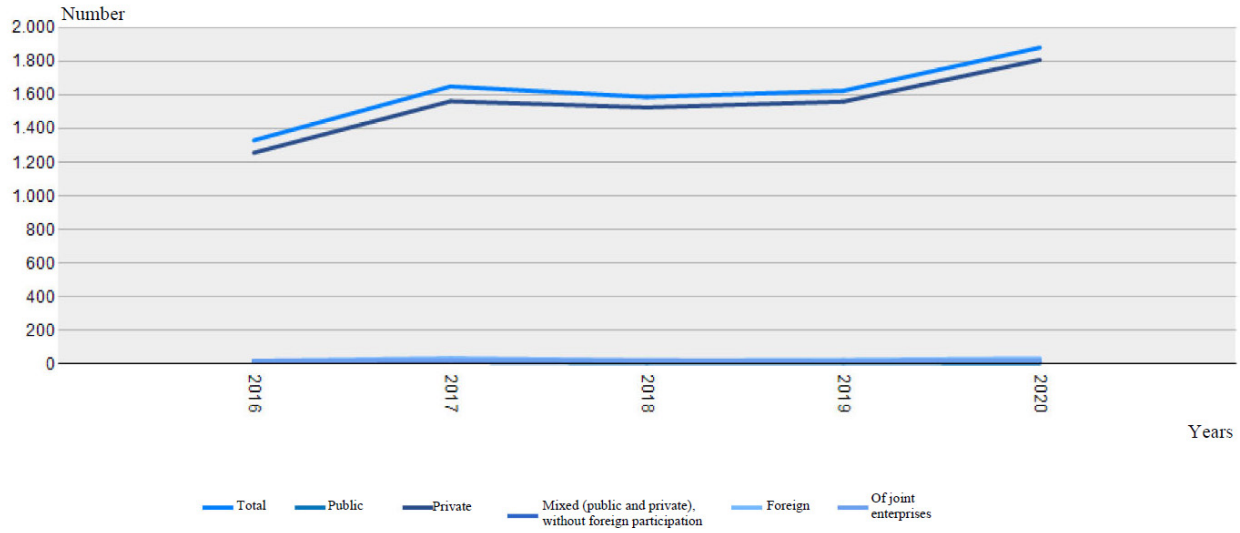

Figure 7. Construction organizations by forms of ownership, years 2016-2020

Source: www.statistica.md

The evolution of CDW generation is directly connected with economic development, level of investments and standard of living. The accelerated, although uneven, development of the construction sector in the Republic of Moldova in recent years has led to a massive increase in the annual quantities of CDW.

Morphological composition of CDW

Given that buildings have a lifespan of several decades, it is obvious that for construction waste obtained today, construction materials manufactured a few decades ago are relevant, and the materials used today will become waste over 50-100 years. Certain materials used in the past have now become hazardous waste, such as asbestos, and special measures need to be taken to manage them.

The composition of construction and demolition waste also depends on the type of construction work, whether it is the construction of a new building or the renovation/modification of an older building. Renovation/ modification works result in more waste than construction work on a new building.

It is important to note that almost 95% of the amount of CDW is mineral waste, inert (e.g., mineral compounds, gravel, mortar, concrete and masonry waste, cement, and plaster), about 1% being recyclable waste (metal, glass, plastic, wood) and 3-5% of the CDW composition is harmful (insulating material, asbestos, solder paste, paints, varnishes, cables, oils, etc.).

According to the estimates reflected in the Waste Management Strategy in the Republic of Moldova for the period 2013-2027, approved by GD No 248/2013[28], the total amount of construction and demolition waste will increase from 1.4 million tons in 2010 to 2.6 million tons in 2027.

A construction, demolition, and excavation waste collection system, connected to the needs and possibilities of the construction materials industry, will be functional in the recycling of construction, demolition and excavation waste while ensuring the participatory collaboration of all stakeholders in the field of construction, so that to contribute to the achievement of the general objectives in promoting the circular economy.

Without the necessary investment to implement these interventions, it is impossible to take the next steps towards a circular materials management system.

Construction and demolition waste (CDW) management is deficient at national and local level. The causes of this situation are common, as follows:

- absence of information and environmental concerns on the part of some economic operators in general, and some construction workers in particular;
- non-compliance with general legislation on waste management, absence of a state-approved regulation on CDW management, as well as other issues related to ensuring the compliance of economic activities with legal environmental requirements;
- absence of policies to prevent the generation of construction waste during the design and execution phases;
- absence of local or regional systems for the collection and treatment of construction and demolition waste;
- non-compliance with the legal provisions establishing the conditions regarding the waste management method when authorizing construction and demolition activities.
- shortage of authorized CDW platforms. An example is the CDW platform in Chisinau, located near Ghidighici village, Chisinau. In 2019, environmental inspectors issued a recommendation for Chisinau Mayor's Office to stop the activity of this platform. Now, this platform is currently 98% used for CDW storage, and was expected to be closed in March.
- Now, a part of the CDW are stored in an unorganized manner, in the areas where there were demolitions, another part were used to fill both private and public lands.

28 https://www.legis.md/cautare/getResults?doc_id=67104&lang=ro

Another issue regarding CDW is related to the record, reporting and knowledge of the quantities of CDW generated/ collected/ treated/ capitalized/ eliminated. Currently the only institution involved in this process is the MA, which systematizes the data reported through the platform www.siamd.gov.md.

Perhaps, for the CDW sector, involvement of local authorities would be useful in the future. Demolition and construction works are carried out on the basis of approvals and authorizations previously obtained from the competent authorities, but regarding the management of CDW generated as a result of construction works, without explicit requirement for CDW reporting, location and identification, it is complicated to follow their management. The beneficiaries of construction works do not have information on the management of CDW, being reluctant to accept additional costs generated by a correct management of CDW, as well as additional costs for waste disposal services.

2.3.2. REGULATORY FRAMEWORK APPLICABLE TO CONSTRUCTION AND DEMOLITION WASTE

The current policy framework on CDW regulation come out from the *Waste Management Strategy in the Republic of Moldova* for the period 2013-2027 (GD No 248/2013), which specifies this waste stream and provides only a few measures on creating the capacity to treat contaminated waste with hazardous substances from construction and demolition, in order to recover or dispose of them (point 9 of SO2 of the Action Plan).

According to the draft *National Waste Management Program for 2022-2027,* which is currently being developed by the MoE, includes the following targets:

- **In the short run (2022-2025) -** ensure the recovery of 20% of valuable resources and adequate management of construction and demolition waste by recycling and/or safe disposal;
- **In the medium run, (2025-2027) -** treat 35% of construction and demolition waste properly for recycling and/or safe disposal.

At the same time, Law No 209/2016 on Waste establishes the following targets for reuse and recycling of waste:

- **By 2020 -** prepare for re-use and other material recovery operations, including backfill operations, which use waste to replace other substances, non-hazardous waste from construction and demolition activities, except natural geological materials, is increased to a minimum 55% of the total mass.

Main regulatory documents on CDW management:

- Law No 721/1996 on quality in construction;
- Law No 835/1996 on the principles of urban planning and territory development;
- Law No 163/2010 on the authorization of construction works;
- Law No 209/2016 on waste;
- Law No 1402/2002 on public communal household services;
- Law No 131/2012 on State Inspection of Entrepreneurship Activity;
- Law No 160/2011 on the regulation by authorization of entrepreneurial activity.

Although, there is currently no Regulation on the management of demolition and construction waste, there is, however, a regulatory framework for this area as follows:

- **Government Decision No 160/2018** approving the Green Economy Promotion Program in the Republic of Moldova for 2018-2020 and its Action Plan,
- **Government Decision No 99/2018** approving the Waste List;

- **Government Decision No 501/2018** on the Instruction on keeping records and transmitting data on waste and waste management;
- **Government Decision 682/2018** approving the Automated Waste Management Information System Concept, on the basis of which the reporting system www.siamd.gov.md was developed;
- **Government Decision No 561/2020** approving the Regulation on packaging and packaging waste;
- **Government Decision No 586/2020** approving the Regulation on the management of batteries and accumulators and waste batteries and accumulators.

The Government's Action Plan for 2021-2022[29] (GAP, Chapter VI/ Infrastructure and Regional Development, para. 27), also includes the measure of adopting the draft **Urban Planning and Construction Code**, which will establish the unified legal framework for urban planning, territorial planning, authorization and execution of design and construction works, quality assurance of constructions, materials and construction products (forecast for 2022). The draft Code explicitly includes provisions on the regime of construction and demolition waste.

Table. 8. Articles on CDW management in the draft Urban Planning and Building Code

Article	Description
Content of a demolition permit (Article 230)	b) special conditions for the performance of demolition works and storage of construction waste;
Article 434.	Construction post-use (1) post-use building includes decommissioning, dismantling and demolition of buildings, refurbishment and reuse of recoverable items and products, as well as unusable waste recycling, ensuring environmental protection in line with the law.
Article 442.	Phases of demolition and dismantling of buildings
Article 444.	Return to nature of non-usable and non-recyclable waste comprises the following phases: a) use of raw material waste for backfill of embankments;
Article 448. Construction and demolition waste	Construction and demolition waste is waste resulting from activities such as construction of buildings and civil infrastructure, total or partial demolition of buildings and civil infrastructure, dismantling of buildings, repair, upgrading and maintenance of streets.
Article 449. Disposal of construction waste	Construction waste shall be treated and transported by waste holders, those carrying out construction or demolition/dismantling works. (2) Local public authorities, in agreement with the environmental protection and public health authorities, shall indicate the authorized location for the disposal of the waste specified in para. (1) of this Article, the method of disposal and the transport route to the site.
Article 450. Construction waste management	The management of construction and demolition waste shall be carried out by ensuring protection of population's health and of the environment and shall be subject to the provisions of this Code and the environmental legislation in force. The management of construction and demolition waste shall be inspected by competent public authorities for environmental protection and other competent authorities established by law.
Article 451. Duties and obligations regarding construction waste management	Local public authorities, as well as individuals and legal entities carrying out construction and demolition waste management activities have duties and obligations in accordance with this Code, as well as those specific to waste management. The recovery of construction and demolition waste shall be carried out only in facilities, by processes or activities authorized by the competent public authorities.

29 https://gov.md/ro/advanced-page-type/planuri-de-activitate

2.3.3. LIABILITY FOR VIOLATING THE LEGISLATION

Contravention liability

According to Article 399 (1) and (2) of the CvC of RM, a case of a contravention shall be solved by the official examiner in whose jurisdiction the contravention was committed. He/she shall impose the sanctions stipulated in the special part of Book Two of CvC within the limits of his/her competence and only while exercising his/her official duties.

The official examiner can establish contraventions the establishing, solving and sanctioning of which are assigned to the competence of other authorities. In such cases, the examiner shall submit the documentation establishing contraventions to the respective authorities.

According to Article 405 of CvC of RM, IEP is in charge of establishing and examining contraventions related to waste management, stated in the following legal provisions:

Table 9. Contraventions in the field of waste management

Article	Description/sanction
Violations of waste management rules (Article 154)	**Article 154.** Violations of waste management rules (1) The failure to comply with the established procedures for collecting, storing, transporting, burning, neutralizing and discharging, including in water bodies, subsoil etc., of industrial, construction, household and other waste shall be sanctioned for individuals by a fine of 12 to 24 conventional units or by unpaid community work of up to 60 hours and by a fine of 120 to 180 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year. (2) The actions specified in para.(1) if they pose the danger of environmental pollution shall be sanctioned by a fine of 24 to 48 conventional units for individuals and by a fine of 180 to 240 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year. (3) The unauthorized storage or storage in prohibited places or the use of other methods for discharging waste shall be sanctioned for individuals by a fine of 18 to 30 conventional units or by unpaid community work of up to 60 hours and by a fine of 60 to 120 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year. (4) Concealing information or deliberately presenting false or incomplete information on waste management or on its discharge if the system breaks down shall be sanctioned for individuals by a fine of 24 to 30 conventional units or by unpaid community work from 40 to 60 hours, a fine of 60 to 120 conventional units for responsible persons, and by a fine of 180 to 300 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 6 months to 1 year.

Article	Description/sanction
	(5) Violations of accounting and primary control rules in waste management or the failure to observe timeframes for submitting reports in the said area shall be sanctioned for individuals by a fine of 24 to 30 conventional units or by unpaid community work of up to 60 hours and by a fine of 120 to 180 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year. (6) Transferring dangerous waste to individuals or to legal entities that do not have licenses (authorizations) for their transportation, storage or processing shall be sanctioned by a fine of 18 to 30 conventional units for individuals and by a fine of 180 to 240 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year. (7) Failure to observe the system for using installations for processing and neutralizing waste and places for storing or burying household or industrial waste shall be sanctioned by a fine of 30 to 42 conventional units for individuals and by a fine of 240 to 300 conventional units for legal entities with or without deprivation in both cases of the right to carry out certain activities for a period of 6 months to 1 year. (8) The design and construction of companies and other units and the use of materials and technologies that do not comply with the security conditions for their use for processing or discharging waste shall be sanctioned by a fine of 30 to 42 conventional units for individuals and by a fine of 120 to 180 conventional units for legal entities with or without the deprivation in both cases of the right to carry out certain activities for a period of 3 months to 1 year. (10) The failure to ensure the collection and discharge of waste or to allow the storage of waste of any origin shall be sanctioned by a fine of 30 to 60 conventional units for responsible persons.

According to public data of IEP[30], during 2020, most contraventions were found in waste management, followed by flora and fauna protection, and occupational safety. Thus, out of the total number of contraventions found, according to Article 154 of RM CvC, about 1489 contraventions were documented, of which **1406** were related to the failure to comply with the established procedures for collecting, storing, transporting, burning, neutralizing, and discharging, including in water bodies, subsoil etc., of industrial, **construction**, household, and other waste.

We, thus, unfortunately find a high irresponsibility of citizens. At the same time, the situation describes another important aspect related to the inefficient waste management infrastructure.

30 http://ipm.gov.md/sites/default/files/2021-09/IPM_ANUAR_2020.pdf, p.163

Table 10. Results of IEP supervision and control of waste management activities, for the period 2018-2020

Article of RM CvC	154										
Paragraph	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Year	**2018**										
Protocols on contraventions drafted, number	1637	6	6	0	13	0	1	0	0	41	21
Year	**2019**										
Protocols on contraventions drafted, number	2116	2	6	0	1	1	0	0	0	84	12
Year	**2020**										
Protocols on contraventions drafted, number	1406	35	8	-	-	-	1	-	-	35	7

Criminal liability

The RM CC does not expressly regulate crimes related to the mismanagement of construction and demolition waste. Reviewing the environmental crimes stated in Chapter IX of RM CC, we find that out of the 12 crimes regulated, only in 2 of them we can identify a tangential incrimination of acts/omissions related to waste or CDW:

Table 11. Environmental crimes in the field of waste management

Article	Description/sanction
Violation of Subsoil Protection Requirements (Article 228)	Violating requirements on the protection of mineral deposits or other resources in the subsoil, the unauthorized construction or **dumping of toxic waste in areas with mineral deposits**, and the unauthorized disposal of harmful substances into the subsoil when causing: a. the collapse of the land or landslides on a large scale; b. the pollution of underground waters creating danger to the health of the population; c. the death of a person by imprudence; d. other severe consequences.
Water Pollution (Article 229)	This article criminalizes the infection or other contamination of surface or underground waters with used waters or other **waste from industrial, agricultural, communal, or other enterprises, institutions,** or organizations when causing large-scale damage to the animal or vegetal world; to fishery, forestry, or agriculture; or to the health of the population or causing the death of a person.

We note that the criminal legislation does not differentiate between types of waste, specifying only that they must be toxic (Article 228 of RM CC) or belong to enterprises (Article 229 of the RM CC). We draw attention to the fact that the law enforcement authorities have to determine whether the management of construction and demolition waste falls under these two articles of the RM CC. For purposes of clarity, we will analyze them as follows:

Article 228 of RM CC - Violation of Subsoil Protection Requirements

The concept of crime is characterized by 3 essential features:

- existence of an act, manifested as an act/omission that presents a social danger.
- commission of this act with culpability
- existence of a rule that the act in question as a crime.

For purposes of Article 228 of RM CC, acts or omissions that present social danger are:

- violation of protection requirements of mineral deposits or other subsoil resources;
- unauthorized construction in areas with mineral deposits;
- **dumping of toxic waste in areas with mineral deposits;**
- unauthorized disposal of harmful substances into the subsoil;

Products and materials used in construction may contain highly toxic or allergenic compounds, irritant compounds and compounds with unknown toxic properties: degradation products, volatile and semi-volatile organic compounds (formaldehydes, aromatic organic solvents), anti-parasitic compounds, biological pollutants (fungi, mosses, bacteria), natural and artificial mineral fibers (asbestos, glass wool, basaltic mineral wool). On the other hand, long-term storage of non-hazardous waste can become hazardous through contact with various pollutants. Construction waste can therefore be, in some cases, depending on its composition - hazardous waste.

A common feature of environmental crimes is their material component, which implies that the action of **dumping toxic waste in areas with mineral deposits** is consummated from the moment the harmful consequences expressly indicated in the provision of the article occur:

a. causing major collapses or landslides;
b. pollution of groundwater, creating a health hazard for the population;
c. death of a person by imprudence;
d. other serious consequences (major material, environmental or organizational damages)

The severity of the consequences can be determined from a combination of circumstances, such as: extent of the damage, including foregone and unearned income, emergence of obstacles that interrupt the mining process for a long period of time, nature of the damage caused to the environment or to buildings, in the same number and in relation to collapses or landslides, etc.[31]

Therefore, **the dumpling of toxic waste in areas with mineral deposits**, which results in one of the harmful consequences mentioned above, shall be punished by a fine of 650 to 1150 conventional units or imprisonment of up to 5 years for an individual. A fine ranging from 2000 to 4000 c.u. with the deprivation of the right to exercise a certain activity is foreseen for legal entities.

Article 229 of RM CC - Water Pollution

The criminal legislation criminalizes infection or other contamination of surface or underground waters with used waters or other **waste** from industrial, agricultural, communal, or other enterprises, institutions, or organizations when causing large-scale damage:

- to the animal or vegetal world; to fishery, forestry, or agriculture; or to the health of the population
- or causing the death of a person.

31 Criminal Law, Special Part. 2nd edition, June 2005. Sergiu Brânză, Xenofon Ulianovschi, Vitalie Stati, Ion Țurcanu, Vladimir Grosu

As **construction waste** are formed in enterprises and organizations that extract or/and use construction materials, they can be classified as a crime under Article 229 CP of the R.M.

Therefore, the act of polluting water sources with waste from industrial, agricultural, communal or other enterprises, institutions, or organizations when causing large-scale damage to the animal or vegetal world; to fishery, forestry, or agriculture; or to the health of the population, or causing the death of a person shall be punished by a fine in the amount of 650 to 1150 conventional units or by imprisonment for up to 5 years, whereas a legal entity shall be punished by a fine in the amount of 2000 to 4000 conventional units with the deprivation of the right to practice certain activities.

2.3.4. Problematic aspects of construction and demolition waste management

An appropriate management of construction and demolition waste should cover not only the construction phase, but also the construction post-use phase, which includes decommissioning, dismantling and demolition of buildings, refurbishment and reuse of recoverable items and products, as well as unusable waste recycling, ensuring environmental protection in line with the law. Currently the most reported violations in this area include:

- Carrying out the activity without concluding a contract with authorized economic operators for the delivery/collection of waste, in accordance with Article 18(1) of Law No 209/2016;
- Failure to keep records of harmful products and substances in accordance with the register pursuant to Article 72(b) of Law No 1515/1993;
- Failure to pay the environmental pollution fee within the established terms (confirmed by the payment order) according to Article 14 of Law No 1540/1998;
- Failure to carry out the selective disposal of waste formed in accordance with Articles 13(2), 21(1), 61(5) of Law No 209/2016, Article 70 of Law No 1515/1993;
- Performing the activity in the absence of specially equipped premises for temporary storage of waste in accordance with Article 13(4)(a) of Law No 209/2016;
- Failure to report data and information on waste and waste management in AIS MD www.siamd.gov.md in accordance with Article 33 of Law No 209/2016.

3. CHALLENGES AT THE STAGE OF INVESTIGATING ENVIRONMENTAL CRIME

The efficiency of finding contraventions and criminal investigation of environmental crimes in the Republic of Moldova is directly influenced by several circumstances related to the implementation of the existing regulatory framework, institutional and technical management of the authorities involved in this process.

A law on liability for violating the environmental legislation is not enough to ensure successful response to acts or omissions that result in harms to the environment. A well-developed institutional system also plays an important role in the process of detecting environmental crimes and bringing perpetrators to justice.

Following the study carried out and the information included in the annual reports prepared by the IEP and the Public Prosecutor's Office, the following shortcomings were found in the process of establishing contraventions and criminal investigation of environmental crimes:

- ***Material component of environmental crimes***

Criminal legislation criminalizes the pollution of environment components: water, air, soil, subsoil, flora and fauna with pollutants, wastewater or other waste from industrial, agricultural, communal, and other enterprises, institutions and organizations, if it has caused considerable damage to the animal or plant kingdom, fishery resources, forestry, agriculture or the health of the population or caused the death of a person.

Therefore, the material component of environmental crimes means that a crime is deemed to having materialized when the harmful consequences indicated in the respective articles of RM CC occur mass killing of animals, causing considerable damage to the animal or plant kingdom, fishery resources, forestry, agriculture, or health of the population or causing the death of a person.

The crime component exists if considerable damage has occurred. Assessing and computing of damage incurred is currently a challenge in the Republic of Moldova. Thus, prosecutors have difficulties in establishing the harmful consequences, those involving the occurrence of the following consequences, such as: *damage to the health of the population; mass destruction of animals; damage to the environment; pollution, contamination, or infection of water resources; damage to agricultural production; considerable damage to the animal or plant kingdom, fishery resources, forestry and agriculture.*

This is due to:

- lack of accredited environmental forensic experts with special expertise;
- outdated regulatory framework that is not in line with the EU directives, including departmental legislation on procedures for calculating damage caused by the infringement of environmental values;

These impediments, coupled with limited efforts by relevant bodies to establish and assess environmental damage in criminal proceedings, result in refusal to prosecute, although the facts reveal clear violations of environmental protection legislation.

- ***Difficulty in establishing a causal link between environmental crime and the damage caused***

Given the specific nature of environmental crime and the complexity of environmental protection, establishing a causal link between polluting actions and the resulting considerable damage is an extremely difficult task. This is due to the fact that in the case of environmental crimes, the damage occurs later than the actual commission of the harmful act. Moreover, the difficulty in establishing the causal link between environmental pollution and the damage caused is determined, on the one hand, by the plurality of potential sources of pollution and, on the other hand, by the fact that the damage may be the consequence of several acts by the same person, or it may be the consequence of a system of acts/omissions carried out by several persons, making it difficult to identify and individualize them.

At the same time, according to information from the Public Prosecutor's Office, in practice, prosecutors most often focus on the information submitted by environmental authorities and do not try to obtain technical-scientific findings or, depending on the situation, to hear subject-matter specialists. This also has a negative impact on determining of the damages and causal link.

- *Erroneous establishment and classification of acts as contraventions*

As a result of amendments to Law No 179/2018 and the institutional reform, IEP is fully responsible for state environmental control. At present, the Public Prosecutor's Office, as the public authority competent to investigate environmental crimes, is not an investigative body and has no powers to carry out special investigative measures that would allow identifying water pollution cases. IEP is the authority mandated to inspect and detect violations of environmental protection legislation. If the acts or omissions have a more serious nature, it shall refer the matter to the Prosecutor's Office and send the relevant information to it. The reform aimed at dividing the tasks between the prosecution and IEP and to delimit their competences. However, in practice IEP often wrongly assesses and classifies the revealed facts as contraventions, which cannot be overruled in the absence of control actions by the Prosecutor's Office.

- *Outdated methodologies for calculating the damage caused to the environment by failure to comply with the environmental legislation.*

The regulatory basis for calculating damage to the environment is outdated and not aligned to the social and economic reality of the Republic of Moldova, as well as to the specific problems of environmental pollution caused by the development of production and industry.

- *Ineffective cooperation between IEP and prosecutors in investigating environmental crimes.*

While preparing the Study and the Survey Report, we found a weak cooperation between official examiners and criminal investigation body in investigating environmental crimes, due to the lack of a cooperation mechanism between these institutions.

- *Lack of methodological and support materials on investigation of environmental crime.*

We found a lack of methodological and support materials that would facilitate investigating environmental crimes. The need for this also stems from the specific nature of environmental protection and environmental crimes, which requires special knowledge to correctly determine the causal link between the crime and the damage caused, as well as immediate action to identify the perpetrator.

- *Insufficient technical equipment for detecting and investigating environmental crimes.*

This challenge was mentioned by both IEP and prosecution representatives, stating that official examiners do not have any modern equipment for detecting environmental violations, as well as lack of a mobile soil and water sampling laboratory.

4. CONCLUSIONS

Analyzing the existing environmental regulatory framework, the criminal and contravention legislation on the sanctioning of illegal acts/omissions, as well as the survey data, we mention ***that it is necessary to establish effective mechanisms of collaboration between law enforcement agencies and representatives of inspection bodies,*** thus ensuring a higher rate of detection and investigation of environmental crimes, as well as a better quality of the documents drawn up and the evidence collected.

The Republic of Moldova has an inadequate enforcement system in the field of environmental protection in general and in the field of biodiversity conservation legislation. While ***fines and penalties*** can be effective enforcement mechanisms, they are either ***insignificant and do not cover the damage caused***, or they are missing and/or ignored. Since the cash penalties have not been adjusted to the prices that have essentially increased over the last decade, these penalties have become symbolic and need to be adjusted accordingly. In this context, it is recommended to increase the cash penalties for environmental crimes. Thus, fines and penalties need to increase in line with the actual loss of biodiversity (or ecosystem).

Having identified several regulatory gaps, which call for amendments to the regulatory framework, on 25.06.2020, by Letter No 26-2d/20-272, the Prosecutor General's Office submitted the draft Law amending Chapter IX of the Special Part of the Criminal Code to the Ministry of Justice for expert review, legal opinion and promotion. The Prosecutor General's Office should also develop methodological guidelines for the criminal investigation of environmental and related crimes to standardize the positive investigation practices in this area.

The regulatory framework on forestry policy should be developed and refined both in relation to the new requirements of the transition period, and based on the need to harmonize the national forestry policy with globally accepted standards.

To enhance the quality and efficiency of environmental crime investigation, it is necessary to develop methodological and support materials on the investigation of environmental crime and to conduct training to increase the skills of persons involved in the investigation of environmental crimes.

The obtained results reflect the need to amend the regulatory framework on the investigation of environmental crimes by formalizing these types of crimes, since computing the damage, which is material, makes it difficult to hold the offender criminally liable.

The system of penalties for environmental crimes and recovery of environmental damage was found ineffective, even though Law No 207/2016 amending and supplementing certain legislative acts and Law No 208/2016 amending and supplementing the Contravention Code of the Republic of Moldova No 218/2008 increased significantly the penalties for environmental protection and environmental crimes.

It is hence necessary to amend and adjust the methodologies for estimating and computing the damage caused to the environment by violating the environmental legislation, according to the existing realities, as well as to adjust the calculation formulas to the real fees, which would help fight and prevent crimes. Penalties are still too low in relation to the damage caused to the environment, making perpetrators more likely to pay them than to implement the more costly pollution prevention measures.

It also reflects the need to set up a specialized unit/subdivision for environmental crime investigation, either autonomous or in a public authority/institution with special relevant expertise, which will increase the efficiency in the detection and investigation of environmental crime. In addition, cooperation between enforcement and prosecution authorities needs to improve to investigate environmental crimes effectively.

A stronger collaborative relationship between relevant authorities, in particular regarding correct detection and collection of evidence of environmental pollution and crimes committed, will increase the crime detection rate and the punishment of perpetrators, as well as the recovery of caused damages.

Improving the quality of laboratory investigation and equipping investigators and prosecutors with technical capabilities is a necessary measure to identify violation of environmental legislation and compute the degree of environmental pollution and damage caused. The procured equipment will have a long-lasting impact. Besides achieving the short-term objectives, it will also ensure prompt detection of environmental violations, as well as proper prevention and response to such crimes.

To enhance the professional capacities and improve the system of environmental violations investigation, training workshops and seminars are needed to build the environmental legislation knowledge of representatives of Inspectorate for Environmental Protection and Prosecutor General's Office.

ROADMAP

ON OVERCOMING THE EXISTING BARRIERS REGARDING ENVIRONMENTAL CRIME INVESTIGATION

AO EcoContact

2022

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I. INTRODUCTION

This Roadmap was developed as part of *'Preventing environmental crimes for a clean environment'* project, implemented by AO EcoContact with the financial support of Soros Foundation Moldova and co-financed by Sweden.

The project contributes to triggering the review of criminal procedural rules in the field of environmental crime, as well as promoting a debate on the effectiveness of criminal legislation and practices to counter environmental crime and conditions for healthy living.

To achieve the aim of the project, three analytical materials were developed in the field of environmental crime investigation:

- **Survey report** identifying barriers and challenges in environmental crime investigation.
- **Analytical study on the challenges in environmental crime investigations** in the areas of water management, green area and forest management and construction waste management.
- **Roadmap on overcoming the existing barriers** regarding environmental crime investigation (this document).

This Roadmap considers that a clean environment unquestionably contributes to ensuring the fundamental human rights provided by the Constitution of the Republic of Moldova: the right to life and the right to physical and moral health[32]. The effects of environmental pollution have an adverse impact on the entire population of the Republic of Moldova. These effects are amplified by climate change[33]. Environmental crimes and environmental contraventions also have a negative impact on the environment.[34]

Environmental crimes are harmful acts, provided for by criminal law, which affect the social relations in terms of rational use, environmental discipline and population safety, consisting of direct, illegal use of natural objects such as social values (or the direct influence on them), acts that lead to negative changes in the state and quality of the environment .

Environmental crimes affect social values, such as life and health of the person, or his/her property, or components of the environment (water, air, soil, subsoil, flora and fauna), with the following harmful consequences:

- damage to public health;
- death of a person;
- mass perishing of animals;
- environmental pollution (water, air, soil, subsoil);
- damage to agricultural production;
- destruction of forest stands and major landslides;
- essential increase in radiation levels.

In order to hold a person criminally liable for committing an environmental crime, it is necessary to establish the causal link between the person's acts or omissions and the harmful consequences mentioned above.

32 Environmental Strategy for 2014-2023 and the Action Plan for its implementation, approved by GD No 301/2014, [cited 09.02.2022] https://www.legis.md/cautare/getResults?doc_id=114539&lang=ro
33 National Strategy 'Moldova 2030', pg. 117. [cited 09.02.2022] https://cancelaria.gov.md/sites/default/files/strategia_moldova_2030_redactata_parl.pdf
34 BRÂNZĂ S. et. al., Criminal Law, Special Part, Volume II, Ed. 2, Chisinau, ISBN 9975-79-325-8. [cited 09.02.2022] http://drept.usm.md/public/files/Dreptpenalspecialf2f52.pdf

According to the **Survey Report**, official examiner and the criminal investigation body reported the impossibility of determining the causal link between the violation of environmental legislation and the harmful consequences that occurred. In addition, they pointed out that the methodology for computing the environmental damage caused by the crime does not correspond to the current development state of the society and the economy, which makes it impossible to hold a person criminally liable because the amount of damage calculated is very small.

They also stressed the need to strengthen the professional and technical capacities of the institutions responsible for the control and/or investigation of environmental crime. There actions and priorities are reflected in the Environmental Strategy for 2014-2023 and Action Plan for its implementation, approved by Government Decision No 301/2014. The specific objectives of these policy documents accurately reflect the needs also identified by the project implementation team:

1) ensure good governance, and enhance the institutional and managerial potential in environmental protection in order to achieve the environmental objectives more effectively;

2) mitigate the negative impact of business activity on the environment and improve the measures of environmental pollution prevention;

3) create an integrated environmental quality monitoring and control system.

In order to achieve the specific objectives of Action 10 "Ensure the fundamental right to a healthy and safe environment"[35] from the draft National Strategy Moldova 2030, it is necessary to improve the system of responding to and investigating environmental crimes, thus making it possible to improve the quality of water and soil by reducing pollution from wastewater discharges into the natural environment, minimizing the discharge of chemicals and hazardous substances, reducing the share of untreated wastewater and significantly increasing the area of forested land and natural areas.

II. OBJECTIVES, PRIORITIES AND EXPECTED RESULTS

The Roadmap **aims** at triggering the initiation of comprehensive reform in the field of environmental governance and justice by developing and promoting the relevant regulatory framework, with a view to improving mechanisms for countering and investigating environmental crime.

The Roadmap responds to the General Objective and Specific Objectives of the Environmental Strategy for 2014-2023 and the Action Plan for its implementation, approved by GD No 301/2014, which aims at creating an effective environmental management system that contributes to increasing the quality of environmental factors and ensuring people's right to a clean, healthy and sustainable natural environment[36].

Based on the findings formulated in the Analytical Study on identifying barriers and challenges in environmental crime investigation in the field of water management, management of green areas and forest fund, and management of construction waste, the following objectives, implementation measures, scope of actions taken, responsible institutions, implementation deadlines and progress indicators were established for each area of competence:

Streamline the national regulatory framework on environmental crime investigation

In order to improve the existing environmental situation, it is necessary to amend the environmental regulatory framework on environmental crime investigation, namely: adjust the regulatory framework on sanctions for environmental violations to today's reality, with the following expected outcomes identified:

35 National Strategy Moldova 2030, pg. 120, [cited 09.02.2022]https://cancelaria.gov.md/sites/default/files/strategia_moldova_2030_redactata_parl.pdf
36 Environmental Strategy for 2014-2023 and the Action Plan for its implementation, approved by GD No 301/2014, [cited 09.02.2022]https://www.legis.md/cautare/getResults?doc_id=114539&lang=ro

Outcome 1.1. Regulatory framework on environmental crime investigation developed;

Outcome 1.2. Effective sanctioning system applied for committing environmental crimes.

Streamline the institutional framework and strengthen its capacities

To strengthen the capacity to investigate environmental crime, it is necessary to set up/have a specialized unit for environmental crime investigation and to provide trainings for authorities involved in detection and investigation of environmental crimes. The following expected outcomes were identified for these measures:

Outcome 2.1. Institutions investigating environmental crime carry out their duties efficiently;

Outcome 2.2. Cooperation mechanism between the criminal investigation body and official examiners strengthened;

Outcome 2.3. Continuous training programs organized periodically.

Streamline the system of supervision, inspection, counteracting, sanctioning of environmental violations and recovery of environmental damage.

Strengthening the technical capacities will help streamline the mechanism for detecting and investigating environmental crimes, ensuring a better detection rate of environmental violations. The following outcomes were established:

Outcome 3.1. Inspection and sanctioning system for environmental legislation violation streamlines;

Outcome 3.2. Authorities involved in detecting and investigating environmental crime equipped with modern equipment.

The roadmap comes with a committed response to the shortcomings identified. As a recommendation, it does not replace existing policy documents on environmental protection.

Its purpose is to establish a sound regulatory and institutional basis and to mobilize the available and necessary sources for the actions/reforms to be undertaken in the immediate period ahead: 2022-2024. For these reasons the actions included have a narrow time horizon. The document is to be submitted, discussed and completed jointly with representatives of the Ministry of Environment, Inspectorate for Environmental Protection and Prosecutor General's Office.

III. ROADMAP

No	Proposed actions	Issue addressed	Deadline	Responsible institution	Performance indicators
Priority 1. Develop and streamline the national regulatory framework on environmental crime investigation *Outcome 1.1 Regulatory framework on environmental crime investigation developed;* *Outcome 1.2. Effective sanctioning system applied for committing environmental crimes.*					
1.	**Amend Chapter IX (Articles 223-235) of the Criminal Code and increase the amount of penalties for these crimes**	*To streamline the mechanism of bringing criminal liability for environmental crimes, it is necessary to amend Chapter IX (Articles 223-235 of the Criminal Code) of the Criminal Code and to increase the level of penalties for these crimes according to the degree of danger of the offence. The penalties provided separately for each type of environmental crime do not meet environmental protection standards and advanced technologies in carrying out certain types of economic activities that impact the environment.*	2023	*Ministry of Justice, Ministry of Environment Prosecutor General's Office*	*Chapter IX of Criminal Code amended*
2.	**Amend the Law on Environmental Protection No 1515/1993.**	The Law on Environmental Protection No 1515/1993 is the basic general framework for setting environmental protection objectives and standards. The provisions of this law are not aligned with the current development status and the solutions for environmental protection cannot be applied to current economic activities. In this respect, to make the environmental protection system more efficient, it is necessary to adjust Law No 1515/1993, including the part concerning the system for recovering the damage caused to the environment by the committed environmental crimes.	2023	Ministry of Environment, civil society	Draft law adopted by Parliament
3.	**Adjust the national forest policy to the recommendations of specialized international fora, as well as develop and approve the draft Consolidated Program for the Sustainable Development of the Forestry Sector of the Republic of Moldova**	To improve the management of the forest fund, it is also necessary to update the policy documents applicable to the national forestry sector, establishing the objectives and actions for expanding and developing the national forest fund, including the expansion of the forested area up to 15% of the country's surface by 2030	2023	Ministry of Environment, Moldsilva Agency	Policy documents developed/ adjusted
4.	**Draft the new version of the Forest Code**	A priority action for an effective regulation of the forest fund is the drafting of the new Forest Code, adjusted to the realities of managing and adapting the national forest fund to climate change (including new chapters, such as: forest payments, communal and private forest sector, forest leasing, biodiversity conservation, etc.).	2022	Ministry of Environment Moldsilva Agency	Forest Code approved in new version
5.	**Review the methodologies for estimating and calculating the environmental damage caused by environmental violations**	The calculation of environmental damage is based on methodologies approved about 20 years ago. The indices used to calculate these damages are very low. This problem is also identified in the Environmental Strategy, GD No 301/2014, which states that the system of penalties and recovery of environmental damage is not effective, the payments are too low, making perpetrators more likely to pay them than to implement the more costly pollution prevention measures. Calculation methodologies need to be reviewed and adjusted in line with national environmental protection standards and the missing methodologies need to be developed.	2023-2024	Ministry of Environment, Inspectorate for Environmental Protection	Methodologies reviewed and adopted

No	Proposed actions	Issue addressed	Deadline	Responsible institution	Performance indicators
6.	**Develop methodological guidelines on environmental crime investigation**	Methodological guidelines on environmental crime investigation will improve the investigation of environmental crimes by indicating the directions of action for each type of environmental crime: water, land or air.	2022-2024	Prosecutor General's Office, Ministry of Environment, Inspectorate for Environmental Protection, National Institute of Justice	Guidelines developed
Priority 2. Streamline the institutional framework and strengthen its capacities *Outcome 2.1. Institutions investigating environmental crime carry out their duties efficiently;* *Outcome 2.2. Cooperation mechanism between the criminal investigation body and official examiners strengthened;* *Outcome 3.3. Continuous training programs organized periodically*					
7.	**Create/availability of specialized environmental crime investigation units**	A specialized environmental crime investigation unit will increase the rate of detection of environmental crime and increase the rate of punishment of perpetrators and recovery of environmental damage.	2023	Ministry of Justice, Ministry of Environment, Prosecutor General's Office, Inspectorate for Environmental Protection	Specialized unit created/ available
8.	**Organize trainings on environmental protection and sustainable use of natural resources**	To enhance the professional capacities and improve the system of environmental violations investigation, training workshops and seminars are needed to build the environmental legislation knowledge of representatives of Inspectorate for Environmental Protection and Prosecutor General's Office.	annually	Prosecutor General's Office, Inspectorate for Environmental Protection	Workshops organized
9.	**Conduct training on the specifics of environmental crime investigation and sampling.**	Training on the specifics of environmental crime investigation and evidence collection will strengthen cooperation between the authorities involved in this process, about correct detection and collection of evidence of environmental pollution and crimes committed.	annually	Prosecutor General's Office, Inspectorate for Environmental Protection, Operational Environmental Investigation Service of the Environmental Reference Laboratory	Trainings organized
10.	**Increasing the number of units staff of the Inspectorate for Protection environment**	Increasing the number of staff units will contribute to a proper detection of multiple violations of environmental legislation. A cause of misidentification and sanctioning of infringements is due to the insufficient number of units of the subdivisions of the Inspectorate for environment protection. Enough staff units will help increase capacity on monitoring the compliance with environmental legislation.	2023-2024	Ministry of Environment, Inspectorate for Environmental Protection	The number of Staff units approved

No	Proposed actions	Issue addressed	Deadline	Responsible institution	Performance indicators
Priority 3. Streamline the system of inspection and sanctioning of environmental violations and recovery of environmental damage. *Outcome 3.1. Inspection and sanctioning system for environmental legislation violation streamlines;* *Outcome 3.2. Authorities involved in detecting and investigating environmental crime equipped with modern equipment.*					
11.	**Equip authorities involved in the detection and investigation of environmental crimes with the necessary equipment for the prompt detection of environmental violations**	Equipping the Inspectorate for Environmental Protection with portable equipment for prompt detection of violations of environmental legislation. A Portable gas analyzer is needed for a qualitative determination of pathogens in air and water, - determination of gaseous chemicals in air; Portable water quality analyzer - determination of deviation of some chemical parameters in water. Rapid identification and ID check of environmental perpetrators and taking swift action to establish and recover environmental damage requires the use of drones, binoculars, high-performance cameras; length and height measuring equipment;	2023-2024	Ministry of Environment, Inspectorate for Environmental Protection, Prosecutor General's Office	Equipment procured and commissioned
12.	**Operational Environmental Investigation Service of the Environmental Reference Laboratory, Environmental Agency**	Strengthen the capacities and equip the division with efficient and effective operational equipment for the sampling, preservation, transport and laboratory transmission of samples.	2023-2024	Environmental Agency	Equipment procured and commissioned