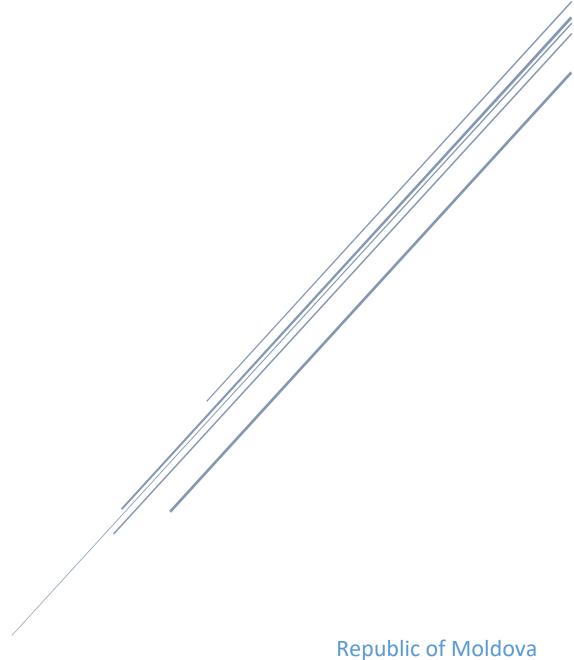
# FINAL REPORT

Brief description of the necessary arrangements identified for the administration the integrated Article 7 and 15 electronic toolkit at the national level after the project ends



Republic of Moldova

December 2021

Each Party shall report to the COP on the measures it has taken to implement the provision of the to the Convention and on the effectiveness of such measures in the meeting the objectives of the Convention.

This report presents the necessary arrangements identified for the administration the integrated Article 7 and 15 electronic toolkit at the national level developed within the framework of the UNEP/GEF project entitled "Integrated Stockholm Convention toolkit to improve the transmission of information under Articles 07 and 15".

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# **Institutional Arrangements**

The institutional arrangements necessary to administrate integrated Article 7 and 15 electronic toolkit should be able to assist the national inventory team to collect, assess and document the quantitative and qualitative data needs, as well as ensure its continuity and integrity and promote the NIP institutionalization process.

There are three main resources for data and information about chemicals / waste management in Moldova, such as:

- 1. Ministry of Environment collects data:
  - a. for Stockholm Convention reporting (PCB/PTT, obsolete pesticides),
  - b. for Basel Convention on (some) hazardous wastes,
  - c. for PRTR register that provides key environmental data from industrial facilities reported annually by more than 300 industrial facilities covering 10 economic activities;
  - d. in the frame of several projects on inventory of wastes and chemicals.
- 2. Statistical Office collects data on waste as reported by obliged subjects. These data are not full-scale and contain mostly information of some specific hazardous wastes and mixed municipal wastes.
- 3. Customs offices collect data of exported / imported goods, chemicals and wastes.
- 4. The National Agency for Food Safety is the administrative authority responsible for state policy implementation in the field of regulations and control for plant protection and phytosanitary quarantine.
- 5. Public Institution "Public Services Agency" the competent authority for the registration and deregistration of motor vehicles and trailers.
- 6. Agency for Technical Supervision the competent authority for the market surveillance regarding construction materials and dangerous industrial equipment.

# *Ministry of Environment (MoE)* – www.mediu.gov.md

Ministry of Agriculture, Regional Development and Environment coordinates the implementation of the treaties and international agreements related to waste and chemicals management to which the Republic of Moldova is a party. It also contributes to the collection and dissemination of the information about waste and chemicals management, including in the cross-border context, and ensures the public access to information.

# National Bureau of Statistics www.statistica.md

Law on official statistics establishes the principles for the collection, processing, centralization, dissemination and storage of statistical information, including on substances and chemicals. In addition, the statistical information on the formation, use and neutralization of toxic waste is collected by the NBS through a statistical form separate from the economic agents that carry out such activities.

# Customs Service of the Ministry of Finance – www.customs.gov.md

The Customs Service controls and admits import/export of chemicals and waste on the territory of the Republic of Moldova on the basis of permissive acts, and cooperates with environment authorities in the process of implementing the international environmental treaties.

# National Food Safety Agency Industry - www.ansa.gov.md

The Agency performs the supervision and control of the production, import, marketing, use and storage of plant protection products in accordance with the legislation in the field of plant protection.

# Public Institution "Public Services Agency"- www.asp.gov.md

The registration, transcription of the transfer of ownership and deregistration of vehicles and trailers is carried out by the territorial subdivisions of examination and registration of vehicles of the Public Institution "Public Services Agency" at the request of vehicle owners or their agents (after certifying that the vehicle is not listed on registration as announced in pursuit according to the information resources held by the competent authorities of the Republic of Moldova).

# Agency for Technical Supervision – www.ast.gov.md

The Agency performs the supervision and control for safety of dangerous industrial objects, market surveillance regarding construction materials and dangerous industrial equipment / objects; fire safety and civil protection, etc.

# **Business**

The most important economic activities related to the POPs data are energy sector, plastics production, construction materials, transport (air and railway), textiles, waste recyclers. It should be noted that not always companies were aware about used raw materials or products. In many cases only commercial name of chemical products has been offered and later expert team verify SDS on the Internet and conclude on POPs content. In case of energy sectors some companies provide clear documents (customs invoices or SDF) stating that they use a free PCB oil.

### Administration of quantitative data needs for integrated Article 7 and 15 electronic toolkit

Assessment of POPs pesticides (Annex A, Part I) (production, import, export, use)

- Production statistics yearly statistical report Prodmold
- Import/export databases Custom Service or open databases https://comtrade.un.org/data
- National Agency for Food Safety
- Environment Protection Inspection records
- Waste Management Information System
- Chemicals Registry

Assessment of PCBs (Annex A Part II) (production, import, export, use)

- Import/export databases Custom Service or open databases https://comtrade.un.org/data
- reports from the Waste Management Information System specialized report according to the GD 81/2009
- Chemicals Registry

Assessment of POP-PBDEs (Annex A, Part IV and Part V), HBB (Annex A, Part I) and HBCD (Annex A, Part I and Part VII) (production, import, export, use, recycling, alternatives)

- Production statistics yearly statistical report Prodmold
- Import/export databases Custom Service or open databases https://comtrade.un.org/data
- the Waste Management Information System
- Registrations from the Chemicals Registry
- Economic operators

Assessment of PCNs (Annex A part II) (production, import, export, use, alternatives)

- Import/export databases Custom Service or open databases https://comtrade.un.org/data
- Chemicals Registry
- Economic operators

2.3.6 Assessment with respect to DDT (Annex B, Part II)

- National Agency for Food Safety
- Environment Protection Inspection records
- Waste Management Information System
- Chemicals Registry

Assessment of PFOS, its salts and PFOSF (Annex B, Part III)

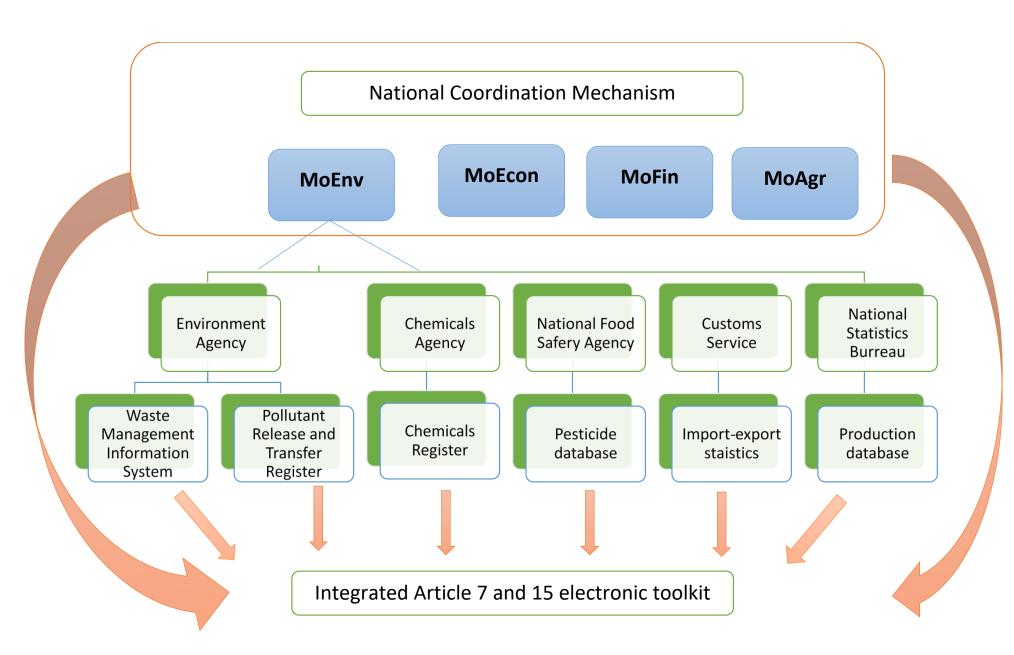
- Import/export databases Custom Service or open databases https://comtrade.un.org/data
- Waste Management Information System
- Chemicals Registry
- Economic operators

Assessment of releases of unintentional produced chemicals (Annex C)

- Statistical yearbooks and statistical publications www.statistica.md
- Import/export of goods statistics
- Customs Service of RM, https://comtrade.un.org/
- National Inventory Report: 1990-2015. Greenhouse Gas Sources and Sinks in the Republic of Moldova / Ministry of Agriculture, Regional Development and Environment / United Nations Environment Programme
- Pollutants Release and Transfer Reguster

# Additional arrangements for quantitative data needs

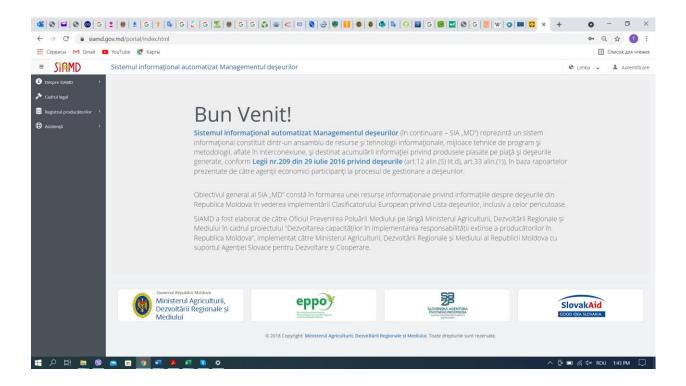
- For each data set preparation of predefined templates according to NIP toolkit structure for automatic generation of necessary data and information;
- For inventories of POPs in articles and of releases development of a national inventory system that would provide the following:
  - o documenting essential information in a concise format;
  - o understanding of roles and responsibilities;
  - o serve as guideline and starting point for the national inventory team in the development of future national inventories;
  - o help the national team to apply the Inventory Guidelines;
  - o ensure transparency in matters relating to the collection of data;
  - o facilitate the improvement of the inventory over time.
- For inventories of POPs in articles and of releases documentation and communication of the origin of the methodology used, of activity data sets and factors used to estimate POPs in articles or releases of uPOPs so that the future national team inventory will be able to refer to the template completed for each POPs, what information was collected, how the data were obtained and what calculation methods were used, what assumptions were made and to reproduce estimates.
- For inventories of POPs in articles and of releases development of an archiving system, which is important for a sustainable national inventory system and an easy reproduction of estimates, ensures avoiding loss of data and information and facilitation of further development of inventories by staff involved in the inventory process.



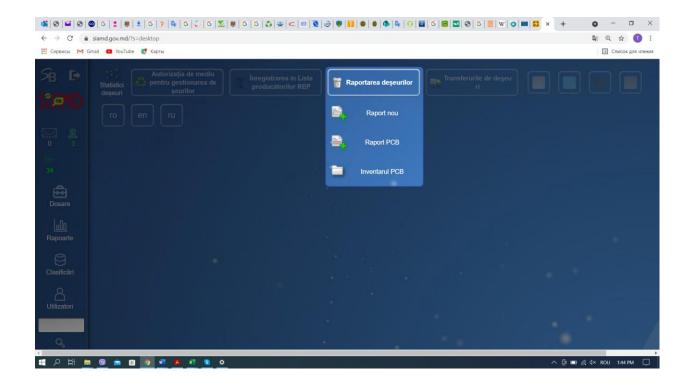
# PCB reporting tool

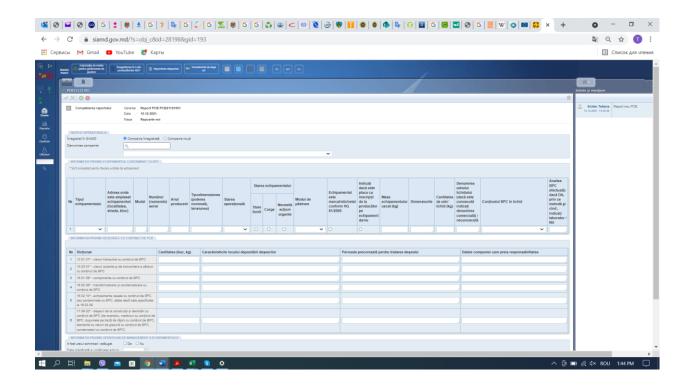
Since the PCB containing equipment and PCB waste is still a major issue for the Republic of Moldova, a special PCB reporting counter was developed with the purpose to easy the data entry for economic operators, but also to allow the Environmental Agency to integrate the information on other PCB containing equipment still in use, needed for the purpose of annual National PCB Inventory (according to PCB Regulation nr. 81/2009)<sup>1</sup>.

Authorized companies can enter the system <a href="www.siamd.gov.md">www.siamd.gov.md</a> and select to apply with specific PCB report:



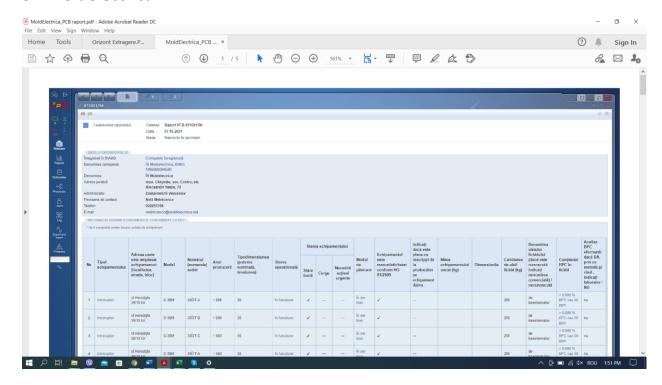
<sup>&</sup>lt;sup>1</sup> https://www.legis.md/cautare/getResults?doc\_id=119567&lang=ro



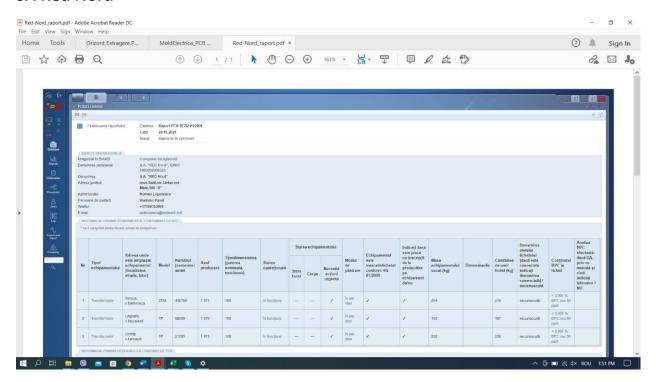


At present 3 main energy producers, suppliers and distributors in Moldova have submitted their reports within the System.

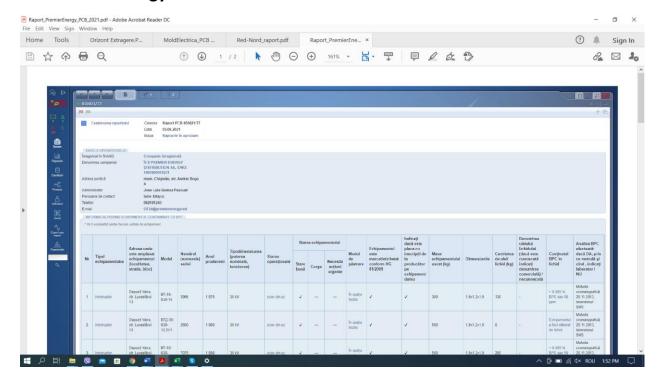
# **SA Moldelectrica**



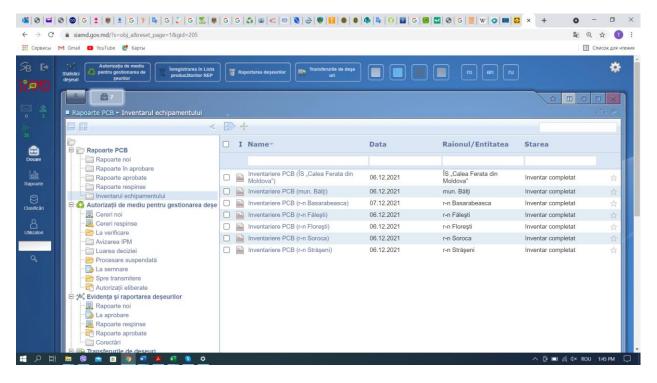
## **SA Red Nord**



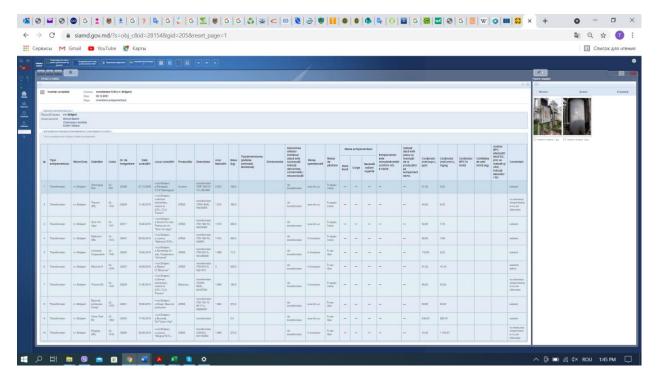
# **ICS Premier Energy Distribution SA**



At the same time, for the scope of National PCB inventory update, the Environmental Protection Inspectorate uploads the data for each raion. This shall allow the Environmental Agency to cross-check the PCB owners and to reach those who will do the regular waste evidence reporting in 2022 to also include the PCB equipment and waste.



An example of raional PCB inventory - Straseni district. The information includes the list of all electrical equipment with PCB contents, the owner, the status and the current location. Also, the system provides the opportunity to annex the pictures (on the right side of the image).



# Conclusions

Reporting as per Article 15 of the Stockholm Convention on POPs requires national coordination and the collection of information and data from multiple stakeholders, including different line ministries and agencies, non-state actors and research specialists.

Even through Republic of Moldova has experienced certain delays under the SC reporting, due to numerous reasons, starting from the institutional reforms and also lack of the national inventories for specific POPs substances (particularly new POPs). Nowadays the project team is working on preparing the fourth report under Stockholm Convention that will be submitted in upcoming week until the end of the 2021.

The Electronic Reporting System is now available for the 5th reporting cycle and the deadline for national report submission pursuant Art. 15 is 31/08/2022, so the project team will look forward to helping the MoE in preparing next for the 5th reporting cycle.

Another important reason was the insufficient and fragmented cooperation between these stakeholders on data gathering and synthesis that has delayed the gathering of the needed information for national reports and NIP updating. In addition, during the previous year, in absence of a structured NIP transmission template, the effort on data compilation was less relevant and efficient.

Challenges that were identified and that needed to be addressed to reduce the workload and to make national reporting processes more efficient include:

- The submission of the same kind of information to multiple agreements (according to different reporting cycles and different responsibilities in countries);
- Information and data needed for reporting are scattered in numerous places within the internet and are not all easily accessible;
- Organizing and maintaining national information in a way that facilitates the re-use of information under multiple agreements.

Being aware of these issues, along with the framework governmental program on digitalization of the public services and development of online reporting and data management tools, under the MCloud platform, starting with 2017 Moldovan line authorities have made significant developments in creation

automatic information systems for environmental data reporting under the chemicals and waste and namely:

- Waste management information system <u>www.siamd.gov.md</u>
- Pollutant Release and Transfer register system <u>www.retp.gov.md</u>
- Chemicals Products placed at the market register (at piloting phase) www.repc.gov.md

Currently, a framework for ensuring collaboration on chemicals and waste management between the central authorities in the field of environmental protection, agriculture, health, economy, industry, statistics has improved, particularly because certain information is already available / in the process of being gathered and uploaded. The benefits of using of the mentioned above existing national online register/ system, also having the NIP transmission template, shall contribute to upcoming future for:

- identification and retrieval of relevant chemicals and waste information for reporting purposes;
- organizing/curating the information and reference documents for a specific report;
- supporting the analysis of national information against the MEAs, including the SDGs framework;
- providing the use of the same working space by several reporters/ data users:
- facilitating inter-ministerial communication and cooperation at the national level.

The IT solution that is currently being developed/ piloted under the auspices of environmental authorities in order to comply with the reporting obligations under the Article 15 of the Stockholm Convention on POPs it is crucial for the country to improve the tools, technical knowledge, organization of the data collected and financial support to execute the required activities (e.g. desk study, surveys, data analysis).

Depending on the integrated electronic toolkit access credential options to be developed by UNEP/BRS Secretariat, the Ministry of Environment will take internal decision in designating the relevant experts who are giving access to use, upload and submit NIP information through the NIP Submission Module of the toolkit.

# Report on potential linkages of the integrated electronic toolkit with the data management systems available at the national level

# REPUBLIC OF MOLDOVA







# Introduction

The present report is elaborated the framework of the UNEP/GEF project entitled "Integrated Stockholm Convention toolkit to improve the transmission of information under Articles 07 and 15", with the purpose to check to which extend the existing information systems on chemicals and waste data reporting in Moldova can be linked to the integrated electronic toolkit modules, currently developed within the project.

This online toolkit should provide the means for Parties to submit NIPs and their updates, integrating 4 modules: one NIP submission module, one Guidance module to provide guidance documentation (i.e. an easy to access to a library of relevant guidance documents for the NIPs and Reporting processes, such as inventory guidance documents), a POPs inventory module to support data collection on POPs inventories and a Queries module to allow interrogating the database behind the integrated electronic toolkit. These modules will provide benefits to the NIPs' updating process and to Reporting under Article 15. The NIP submission module will be connected in an automatic way to the Electronic Reporting System of the SC. This connection will allow that Parties, when the time of reporting arrives, use previously collected data from inventories within their NIPs' updates.

The report provides the general overview of the existing systems for reporting in Moldova and potential linkages that can be used in order to provide reporting under the Stockholm Convention on POPs and filling in data under the NIP update.

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# 1. Current infrastructure for data collection

# 1.1 Governmental Platform M-Cloud

Automatic Information Systems in the Republic of Moldova are elaborated and function in compliance with the Law on State Registries no. 71 dated on 22.03.2007. Security of systems, which means guaranteed data retention and authorized access, is implemented in accordance with Government Decision no. 201/2017 on the approval of the Mandatory Minimum Cyber Security Requirements.



The MCloud platform is a common government information infrastructure, which operates on the basis of "cloud computing" technology hosted in the consolidated data center infrastructure. The platform is a model for the provision of IT services, through the telecommunications system of public administration authorities, as well as through public communications networks, exclusively through secure data access and transport channels.

The cloud computing technology of the MCloud platform is intended for the exclusive use by the central administrative authorities and organizational structures within their sphere of competence, subordinated to the Government (APC) and is an innovative delivery model, based on consumption of infrastructure, platform and software services.

In accordance with the provisions of Government Decision no. 414 of 08.05.2018 on measures to strengthen data centers in the public sector and streamline the administration of state information systems, I.P. The "Information Technology and Cyber Security Service" (STISC) as the owner of the joint government platform (MCloud) and provider of IaaS services, is empowered to ensure the administration, management and expansion of this platform.

The government has launched the joint government technology platform MCloud in order to streamline spending on IT services, which comes to capitalize on government spending and strengthen data centers into a form of shared management. Thus, costs are significantly reduced, the work of officials becomes more efficient and, finally, quality public services are generated.

# 1.2 Institutional framework for environmental data management on chemicals and waste

Chemicals and waste data management at national level has a multilayer and multi-level management arrangements. It is still partly fragmented among various institutions. The following are main official sources of waste and chemicals data in Moldova:

- 1. Ministry of Agriculture, Regional Development and Environment
  - 1.1 Environmental Agency
  - 1.2 Environmental Protection Inspectorate
  - 1.3 National Agency for Regulation of Nuclear, Radiological and (Chemical)<sup>1</sup> Activities
- 2. Statistical Office
- 3. Customs Service
- 4. National Food Safety Agency
- 5. National Agency for Public Health

Ministry of Environment of the Republic of Moldova is the state authority responsible for development and promotion of policies and strategies addressing agriculture, food production and food safety, regional and rural development, use of territory, environment protection, climate change and natural resources. However, it should be noted that after the institutional reform hold in 2017, three central authorities have been merged in one, that environment became last priority in new established authority.

The main regulatory bodies are the **Environment Agency**, which is responsible for implementation of the environmental protection policy, including waste management issues, while the **National Agency for Regulation of Nuclear**, **Radiological and <u>Chemical Activities</u>**, which is in process of establishment, shall be responsible for the implementation of chemicals policy. For both sectors, the control authority is the Environment Protection Inspectorate.

All three information systems (WMAIS, PRTR, AIS REPC (Chemicals Registry)), under Ministry of Environment umbrella's, represent the mail tool for collection of data on waste, chemicals placed in market and release of emissions from several economic sectors.

Among other actors, providing the relevant data are:

**National Food Safety Agency** performs the supervision and control of the production, import, marketing, use and storage of plant protection products in accordance with the legislation in the field of plant protection, currently responsible for the entire authorization process for placement on the market of pesticides.

<sup>&</sup>lt;sup>1</sup> Pending creation according to Article 8 of Law on Chemicals nr. 277/2018 https://www.legis.md/cautare/getResults?doc\_id=112668&lang=ro

### **Customs Service**

The Customs Service within the Ministry of Finance is the main provider of data on import/export of goods and waste. In addition, there is freely available database on trade of goods <a href="https://comtrade.un.org">https://comtrade.un.org</a>. However, it has some limitations related to level of detail and it does not provide data on importers.

### **National Bureau of Statistics**

The Bureau is the main provider of data on local production of goods. The data on waste management is available until 2018, however it is based on an outdated classification, which was replaced by a new one. As for the chemicals, such data, except for production, it has never collected by NBS.

### National Agency for Public Health

The agency responsible for keeping the Registry on Biocides till creation of the Chemicals Agency. According the Chemical Law, a common platform on permit issue must be established the Chemical Agency. It is envisaged that in one year after the Chemical Agency establishing, interministerial body will become responsible for the entire authorization process on put into the market chemical, including biocides.

#### **Business**

The most important economic activities related to the POPs data are energy sector, plastics production, construction materials, transport (air and railway), textiles, waste recyclers. It should be noted that not always companies were aware about used row materials or products. In many cases only commercial name of chemical products has been offered and later expert team verify SDS on the Internet and conclude on POPs contain. In case of energy sectors some company provide clear documents (customs invoice s or SDF) that stated that they use a free BCB oil.

### NGOs and civil society

Civil society actors are active in Moldova particularly in the cases of reporting the cases related to illicit waste dumping within various localities, on water pollution and also regarding various information campaigns for general public related to environmental behavior of the population. Also, several NGOs – UniAgroProtect and EcoContact have been partners to implementation of the Chemicals Safety Week in Moldova, organized during 2013-2015.

As for POPs chemicals, various NGOs were part of the larger GEF sponsored project on elimination of stocks of obsolete pesticides. During this 5 year period (2007-2012), NGOs played an important role in working with population during the repackaging, transportation to central storage and elimination of the pesticides. They have also initiated several projects related to remediation of soil from former Ops storages, on closure of the remainings of the building materials into the cofferdam. NGOs from Gagauzia have played role in bringing attention to the issue of the CIsmichioi landfill of the pesticides, which has been remediated with the support of the Czech development assistance program in 2017-2018.

Moldova as well yearly participate in activities related by IPEN Lead in Paint week, that have started in 2014 and each year various measures are organized to inform the public on negative impact of plumb.

# 1.2 Automatic Information System "Pollutant Release and Transfer Register"

# 1.2.1. General system description



The Pollutant Release Transfer Register (PRTR) – <a href="www.retp.gov.md">www.retp.gov.md</a> is an instrument for industry reporting on MEAs which allows for the reporting and consolidation of a large part of the pollutants and processes covered by different chemical-related MEAs.

The national PRTR system (in Romanian is Registrul Emisiilor și Transferului de Poluanți - RETP) represents an online platform for submission of reports by the economic operators on their releases to

air, water and soil, as well as off-site transfers of waste and their destination or operations disposal or recovery of waste and off-site transfers of pollutants in waste water.

The specific objectives PRTR system are as follows:

- Facilitate public participation in environmental decision-making;
- Improve the accounting of pollutant releases and transfers at both national and local levels;
- Identify major sources of release and transfer of pollutants;
- Track emissions trends;
- Integrate and harmonize the reporting requirements
- Ease the pollutant release and transfer reporting by operators;
- Deliver data for policy and decision makers;
- Contribute to the implementation of international obligations.

The implementation of PRTR Protocol provides easy access and traceability. It legally falls under the PRTR Regulation (Government Decision no 373/2018)<sup>2</sup> and it shall fall under the industrial emissions legislation to be adopted soon. It is expected to cover all the facilities (e.g. waste water treatment sites, chemical plants, incinerators) engaged in 65 economic activities within 9 sectors.

National PRTR system covers 102 pollutants in 7 Groups (GHG, chlorinated organics, heavy metals, inorganic substances, other gases, other organic substances, pesticides). These appear to cover part of the scope of the MEAs collecting information on potentially hazardous chemical substances and/or pollutants released to air, water and soil or transferred off-site for treatment or disposal.

<sup>&</sup>lt;sup>2</sup> https://www.legis.md/cautare/getResults?doc\_id=103021&lang=ro\_

# 1.2.2. POPs reported under the system

In accordance with the Annexes A and B of the *Stockholm Convention on POPs*, a list of substances is subject to elimination and restriction. Thus, according to the first country report submitted to the Convention Secretariat in the year 2007, the production and use of Aldrin, Dieldrin, Heptachlor, Toxaphene and DDT were prohibited since the Soviet times. Moreover, the new legislation on chemicals, which is currently under development in the Republic of Moldova in line with provisions of MEAs and EU legislation, prohibit the import and production of the listed above substances. Hence, these substances were proposed to be exempted from the PRTR reporting and are marked with "\*\*".

Other POPs listed in the Annex A, B and C of the Stockholm Convention are as follows: Chlordane, Chlordecone, Endrin, Hexabromobiphenyl, Hexabromocyclododecane (HBCD), Hexabromodiphenyl ether and heptabromodiphenyl ether, Hexachlorobenzene (HCB), Hexachlorobutadiene, Alpha and Beta hexachlorocyclohexane, Lindane, Mirex, Pentachlorobenzene, Pentachlorophenol and its salts and esters, Polychlorinated biphenyls (PCB), Polychlorinated naphthalenes, Technical endosulfan and its related isomers, Tetrabromodiphenyl ether and pentabromodiphenyl ether, Polychlorinated dibenzo-p-dioxins (PCDD), Polychlorinated dibenzofurans (PCDF).

PRTR shall serve as a tool to report the releases of the following of POPs:

- Perfluorooctane sulfonic acid, their salts and perfluorooctane sulfonyl fluoride (PFOS, its salts and PFOSF)
- Alpha hexachlorocyclohexane
- Beta hexachlorocyclohexane
- Chlordane
- Polychlorinated biphenyls (PCBs)
- Chlordecone
- Dibenzoparadioxins polychlorinated and dibenzofurans (PCDD /PCDF)
- Endrin
- Hexabromodiphenyl ether and heptabromodiphenyl (c-octaBDE)
- Hexabromobiphenyl (HBB)
- Hexachlorobenzen (HCB)
- Lindane
- Mirex
- Pentachlorobenzene (PeCB)
- Hexabromocyclododecane (HBCD)
- Polychlorinated naphthalenes (PCNs)
- Tetrabromodiphenyl ether and pentabromodiphenyl ether (c-penta-BDE)
- Decabromodiphenyl ether (decaBDEs)
- Dicofol
- Short-chained chlorinated paraffins (SCCPs)
- Perfluorooctanoic acid (PFOA)

The following sectors were identified as **potential point and diffuse sources of POPs releases**:

#### Point sources:

- Energy sector thermal power stations and other combustion installations
- Production and processing of metals

- Mineral industry (Cement clinker and lime production, glass production)
- Chemical industry (basic plastic materials; surface-active agents and surfactants; basic pharmaceutical products)
- Waste and waste water management (open burning of landfills)

### Diffuse sources:

- unauthorized landfills (open burning)
- emissions from transport means
- agricultural activities (use of pesticides and fertilizers)

# 1.2.3 Navigating the PRTR portal

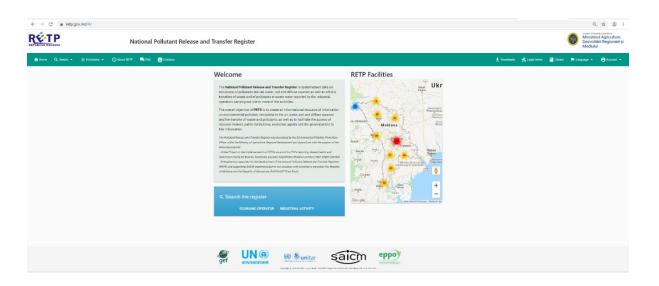


FIGURE 1. THE HOME PAGE INTERFACE OF THE PRTR SYSTEM, WWW.RETP.GOV.MD

## PRTR system has several interfaces:

The public interface of SIA REPT consists of:

- a. The default (Home) page that will consist of two parts:
  - i. Text with images on the pollutant emissions and transfer register)
  - ii. Map of Moldova with the location of the facilities

A menu with the following options: About RETP, Frequently Asked Questions, Search, Pollutant Emissions and Transfers, Diffuse Emissions, Reports, Downloads, Legal Framework, Library.

The page of the user/business used will be composed of 3 parts:

- i) Dynamic filters
- ii. Statistics about newly submitted reports, information about a report, report validation tool.
- iii. View on map

# 1.2.4 Filters applied by system, including for POPs substances

The system will provide advanced search interface. Initially, generic filters will be displayed and when a generic filter is selected, the results that fall within the selected filter will be displayed. Likewise, other filters will be opened, which are part of the previously selected category. The list of filters can be displayed by drop-down items or check boxes as appropriate.

After selecting the filters, the results will be displayed in the same page in tabular form. Each table will contain columns for display depending on the search category (by installation, activity type, region, etc.). In addition to the table, a map with the locations of each installation will be displayed. Each installation will be represented by an icon on the map, and clicking on that icon will display a modal dialog with other additional information.

### Types of **specialized searches**:

- a. Installation level search
- b. Search by activity level
- c. Search at the region level
- d. Search at pollutant category level according to MEAs (Multilateral Environmental Agreement)
- e. Pollutant search
- f. Pollution transfer search
- g. Search at the level of waste transfer

In case of **search after pollutant transfer**, AIS PRTR will display the following information:

- a. General information on pollutant transfer according to the selected filters (pollutant, year, region, quantity, number of installations, environmental components).
- b. Activities grouped by sectors from which the selected pollutant is transferred, including the total on all activities.
- c. The regions from which the selected pollutant is transferred distributed on the environmental components (air, water, soil) and the number of installations, the quantity, including the total on all regions.

In case of search after waste transfer, AIS PRTR will display the following information:

a. General information on waste transfer according to selected filters (year, region, number of installations), including graphical distribution (diagrams) of waste transfer (hazardous and non-hazardous).

- b. Activities grouped by sectors from which the waste is transferred grouped by types of waste, including the total by all activities.
- c. Regions from which waste is transferred distributed by type of waste and number of installations, including the total across all regions.
- d. Comparative diagrams of waste shipments by region for each type of waste
- e. List of installations grouped by type of waste. For each type of waste will be displayed the quantity in tons Recovered (Disposal), Disposal (Disposal) and Total with the specification of the basic activity of the installation. When selecting an installation SIA REPT will display details about the selected installation (according to CF.07.01)

The calculation method (measured or calculated) is displayed for all emissions. If the emissions have been calculated, AIS PRTR will display the calculation methodology (link) which will be displayed as a modal window.

AIS PRTR will have the option to download the search results in CSV format. Each table will have a button at the bottom, which allows you to download the results displayed after applying the filters. The contents of the CSV file will contain exactly the same items as in the table until you press the CSV download button.

## 1.2.5 Point sources releases

The following sectors, are reporting under the PRTR:

- 1. Energy
- 2. Metallurgy
- 3. Minerals
- 4. Chemicals industry
- 5. Waste and wastewater
- 6. Food& beverage processing
- 7. Intensive livestock production and aquaculture
- 8. Other activities

The paper and pulp production sector was find not relevant for the Republic of Moldova and therefore, no methodologies for calculation of releases were compiled.

A table which contain the pollutants for which were identified calculation methodologies for each sector is provided below.

1.	Energy sector	a) c)	Mineral oil and gas refineries  Thermal power stations and other combustion installations	(i) Large thermal power stations (ii) Medium and small thermal power stations	COVNM, CO2, CH4, NOx, SOx, NH3, TSP, PM10, PM2,5, BC, Pb, Cd, Hg, As, Cr, Cu, Ni, Se, Zn, Benzo(a)pyrene, Benzo(b) fluoranthene, PCDD/F, Benzo(k)fluoranthene, Ideno(1,2,3)pyrene, Benzo(a)pyrene, Benzo(b) fluoranthene, CH4, CO2, N2O, NOx, CO, COVNM, SOx, TSP, PM10, PM2.5, BC, Pb, Cd, Hg, As, Cr, Cu, Ni, Se, Zn, PCB, PCDD/F, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, HCB  NOx, CO, COVNM, SOx, TSP, NH3, PM10, PM2,5, Pb, Cd, Hg,
		d)	Coke ovens Installations for the manufacture of coal		As, Cr, Cu, Ni, Se, Zn, PCDD F, Benzo(a)pyrene, Benzo(b) fluoranthene, Benzo(k) fluoranthene, Ideno(1,2,3)pyrene, CH4, CO2, N2O
		f)	products and solid smokeless fuel		SUX
		d)	Ferrous metal foundries		NMVOC, TSP, PM10, PM2.5, BC, Pb, Cd, Hg, As, Cr, Cu, Ni, Se, Zn, PCB, PCDD/F, total 4 PAHs, HCB, NOx, CO, SOx, CO2, CH4
2.	Production and processing of metals	e)	Installations:	(i) For the production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes (ii) For the smelting, including the alloying, of non-ferrous metals, including recovered products (refining, foundry casting, etc.)	NOx, CO, Sox, TSP, PM10, PM2,5, BC, Benzo(a)fluoranthene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno (1,2,3-cd)pyrene,CO2, CF4, C2F6
		b)	Opencast mining and quarrying		TSP, PM10, PM2.5, CH4, CO, CO2, N2O, NH3, NMVOC, NOx /
3.	Mineral	c)	Installations for the production of:	(i) Cement clinker in rotary kilns	NO2, SOx / SO2,As, Cd, Cr, Cu, Ni, Pb, Zn  TSP, PM10, PM2.5, BC, CO2, NOx, CO, COVNM, SOx, Pb, Cd, Hg, As, Cr, Cu, Ni, Se, Zn, PCB, PCDD/F, Benzo(a)pyrene, HCB, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene
	industry	e)	Installations for the manufacture of glass, including glass fibre	(ii) Lime in rotary kilns	TSP, PM10, PM2.5, BC, CO2, NOx, CO, SOx  TSP, PM10, PM2.5, BC, CO2, NOx, CO, SOx, Pb, Cd, Hg, As, Cr, Cu, Ni, Se, Zn
		g)	Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain		CO2, CO, NOx, SOx, Praf, BC, HF, HCI

4.	Chemical industry	a)	Chemical installations for the production on an industrial scale of basic organic chemicals, such as:  Installations using a chemical or	<ul><li>(viii) Basic plastic materials (polymers, synthetic fibres and cellulose-based fibres)</li><li>(x) Dyes and pigments</li><li>(xi) Surface-active agents and surfactants</li></ul>	COVNM, TSP  CO2, COVNM  COVNM  COVNM, CO2
		e)	biological process for the production on an industrial scale of basic pharmaceutical products		
		d)	Landfills (excluding landfills of inert waste and landfills		COVNM, PM10, Hg, TSP, PM25, CH4, CO2, N2O
	Waste and	f)	Urban waste-water treatment plants		CH4, N2O, NMVOC, NH3
5.	waste water management		Independently operated industrial waste-water treatment plants which serve one or more activities of this		CH4, NMVOC
		g)	annex		
	ntensive livestock	a)	Installations for the intensive rearing of		NH3, NO, N2O, PM10, PM2,5, TSP, COVnm, CH4
7.	production and		poultry or pigs		
	aquaculture Animal and	۵۱	Claughtarhausas		CO2 CO COV NOV NUI2
	vegetable	a)	Slaughterhouses Treatment and processing intended for	(i) Animal raw materials (other than milk)	CO2, CO, SOx, NOx, NH3 NMVOC, PM10, PM2.5, TSP
	products from		the production of food and beverage	,	NMVOC, PM10, PM2.5, TSP
8.	the food and	b)	products from:	(ii) Vegetable raw materials	141111000, 1111110, 11111111111111111111
	beverage		·		CO2, NOx, CO, COVNM, SO2, PM
	sector	c)	Treatment and processing of milk		
		a)	Plants for the pre-treatment (operations such as washing, bleaching, mercerization) or dyeing of fibres or textiles		NMVOC
	Other	b)	Plants for the tanning of hides and skins		NH3
9.	activities	c)	Installations for the surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating		COVNM, TSP, PM10, PM2.5, BC, CO2, NOx, CO, SOx

## 1.2.6 Diffuse sources releases

The PRTR competent authority shall be in charge to collect the data on pollution from diffuse sources, process and integrate it into the PRTR information system.

According to PRTR regulation, the following diffuse sources are subject of reporting in Moldova:



The methodologies of evaluation of emissions from diffuse sources of pollution were developed based on the methodologies developed in the framework of the UNCCC and the CLRTAP.

**Unauthorized landfills:** information on non-sanitary and illegal landfills is collected by State Environmental Inspectorate and provided by Environmental Agency that further calculates diffuse emissions and maps for all 33 administrative units of the country.

**Transportation:** With the purpose to calculate the transport emissions the PRTR competent authority shall use the relevant information on transport units per administrative-territorial units (i.e. districts) from the State Information Resources Center "Registru" and fuel used by transport units per administrative-territorial units (i.e. districts) from the National Bureau of Statistics.

**Agriculture (livestock & pesticides):** The information on use of pesticides and fertilizers and livestock farms shall be collected from the National Agency of Food Safety under the Ministry of Agriculture and Food Industry.

# 1.3 Waste Management Automatic Information System

# 1.3.1 General system description



Waste Management Automatic Information System (WM AIS, in Romanian it is Sistemul informaţional automatizat Managementul deşeurilor – SIA MD) located at <a href="www.siamd.gov.md">www.siamd.gov.md</a> represents the totality of software and hardware products intended for information collection, storage and

processing in order to create the information resource on waste named the 'Waste Management' Register. It shall include the events related to the economic life cycle, the documents accompanying this cycle, including the import and export of waste, waste producers and certified business entities, as well as the automation of the business-processes of subjects involved in the waste chain and the submission of waste chain information to the public authorities, individuals and legal entities through the departmental portal.

WM AIS waste created based on **technical concept, approved by the Governmental Decision no. 682/2018<sup>3</sup>** By implementing WM AIS the **following goals** will be achieved:

- 1) formation of the unified standardized database at national level regarding the data and information on waste;
  - 2) risk assessment and communication;
- 3) carrying out the procedures for authorization, notification and reporting of regulated waste in accordance with the provisions of EU directives and regulations, the Basel Convention on the control of transboundary shipments of hazardous waste and their disposal, transposed into national law, including Law no. 209 of July 29, 2016 on waste;
  - 4) streamlining the activity of the authorities involved in the waste management process;
  - 5) inter-ministerial and inter-institutional information exchange;
- 6) developing and maintaining the Nomenclature of Producers of Products with Extended Producer Responsibility, including the Nomenclature of Manufacturers of Electrical and Electronic Equipment (EEE);
  - 7) public access to information on waste management;
  - 8) generation of reports on the state of waste management;
- 9) the exchange of information on waste management with the information system of the European Environment Agency and with the environmental authorities from other countries.

The information regarding the implementation of the extended producer responsibility for the products, as well as the data about the quantity of products placed on market, in tones and number of units, the quantities, the number and the category of collected and treated product waste is part of WM AIS.

<sup>&</sup>lt;sup>3</sup> https://www.legis.md/cautare/getResults?doc\_id=108814&lang=ro\_

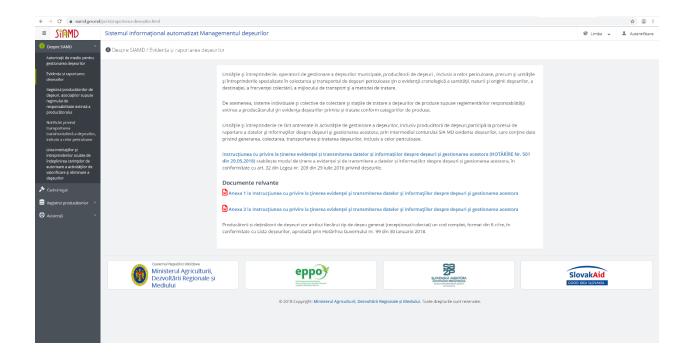


FIGURE 2 WASTE MANAGEMENT AUTOMATIC INFORMATION SYSTEM

# 1.3.2. POPs reported under the system

The primary purpose of the WM AIS is to provide the actors involved in the waste management and monitoring process with a high-performance IT solution used as a support to automate their work in order to implement the European Classifier on the List of Waste, including Hazardous Waste. At the same time, the computer system will perform the automated validation of the content of the applications sent by the authorization applicants and will automatically register all the actions performed by the users. WM AIS also serves as a tool for accumulating information on the products placed on the market and the waste generated, based on the reports of the economic agents participating in the waste management process.

As all waste, both generated and received with the specification of treatment measures for reuse, disposal, storage, etc., is subject to state records, WM AIS has all the tools to ensure these records.

Waste containing POPs can be especially harmful to the environment and to human health. When disposing of waste containing POPs above certain concentration limits, the POP content must be destroyed or irreversibly transformed so that it is no longer harmful.

According to waste list, approved by the Governmental Decision no. 99/2018<sup>4</sup>, the following categories fall under POPs/potential POPs contaminated waste:

10	WASTES FROM THERMAL PROCESSES
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<sup>&</sup>lt;sup>4</sup> https://www.legis.md/cautare/getResults?doc\_id=102107&lang=ro\_

10 01	Wastes from power stations and other combustion plants (except 19)		
10 01 14 *	Bottom ash, slag and boiler dust from co-incineration containing hazardous substances		
10 01 16 *	Fly ash from co-incineration containing hazardous substances		
10 02	Wastes from the iron and steel industry		
10 02 07 *	Solid wastes from gas treatment containing hazardous substances		
10 03	Wastes from aluminum thermal metallurgy		
10 03 04 *	Primary production slags		
10 03 08 *	Salt slags from secondary production		
10 03 09 *	Black drosses from secondary production		
10 03 19 *	Flue-gas dust containing hazardous substances		
10 03 21 *	Other particulates and dust (including ball-mill dust) containing hazardous substances		
10 03 29 *	Wastes from treatment of salt slags and black drosses containing hazardous substances		
10 04	Wastes from lead thermal metallurgy		
10 04 01 *	Slags from primary and secondary production		
10 04 02 *	Dross and skimmings from primary and secondary production		
10 04 04 *	Flue-gas dust		
10 04 05 *	Other particulates and dust		
10 04 06 *	Solid wastes from gas treatment		
10 05	Wastes from zinc thermal metallurgy		
10 05 03 *	Flue-gas dust		
10 05 05 *	Solid waste from gas treatment		
10 06	Wastes from copper thermal metallurgy		
10 06 03 *	Flue-gas dust		

10 06 06 *	Solid wastes from gas treatment		
10 08	Wastes from other non-ferrous thermal metallurgy		
10 08 08 *	Salt slag from primary and secondary production		
10 08 15 *	Flue-gas dust containing hazardous substances		
10 09	Wastes from casting of ferrous pieces		
10 09 09 *	Flue-gas dust containing hazardous substances		
13	WASTE LIQUID OILS AND FUELS (excluding edible oils and those of categories 05, 12 and 19)		
13 01	used hydraulic oils		
13 01 01*	hydraulic oils containing PCBs		
13 03	waste insulating and heat transfer oils		
13 03 01*	insulating and heat transfer oils containing PCBs		
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST		
16 01	end-of-life vehicles from various means of transport (including non-road machinery) and waste from the dismantling of scrapped vehicles and vehicle maintenance (excluding those in categories 13, 14 and subcategories 16 06 and 16 08)		
16 01 09*	components containing PCBs		
16 02	waste electrical and electronic equipment		
16 02 09*	transformers and capacitors containing PCBs		
16 02 10*	discarded equipment containing PCBs or contaminated with PCBs other than those specified in 16 02 09		
16 11	Waste linings and refractories		
16 11 01 *	Carbon-based linings and refractories from metallurgical processes containing hazardous substances		
16 11 03 *	Other linings and refractories from metallurgical processes containing hazardous substances		

17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)		
17 01	Concrete, bricks, tiles and ceramics		
17 01 06 *	Mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances		
17 05	Soil (including excavated soil from contaminated sites), stones and dredging spoil		
17 05 03 *	Soil and stones containing hazardous substances		
17 09	Other construction and demolition wastes		
17 09 02 *	Construction and demolition wastes containing PCB, excluding PCB containing equipment		
17 09 03 *	Other construction and demolition wastes (including mixed wastes) containing hazardous substances		
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FROM INDUSTRIAL USE		
19 01	Wastes from incineration or pyrolysis of waste		
19 01 07 *	Solid wastes from gas treatment		
19 01 11 *	Bottom ash and slag containing hazardous substances		
19 01 13 *	Fly ash containing hazardous substances		
19 01 15 *	Boiler dust containing hazardous substances		
19 04	Vitrified waste and waste from vitrification		
19 04 02 *	Fly ash and other flue-gas treatment wastes		
19 04 03 *	Non-vitrified solid phase		

The system allows to check the reporting under the present code, also the type **R or D codes for disposal** and recovery operations applied.

# 1.3.3. PCB reporting

Since the PCB containing equipment and PCB waste is still a major issue for the Republic of Moldova, a special PCB reporting counter was developed with the purpose to easy the data entry for economic operators, but also to allow the Environmental Agency to integrate the information on other PCB containing equipment still in use, needed for the purpose of annual National PCB Inventory (according to PCB Regulation no. 81/2009)<sup>5</sup>.

Authorized companies can enter the system <a href="www.siamd.gov.md">www.siamd.gov.md</a> and select to apply with specific PCB report:

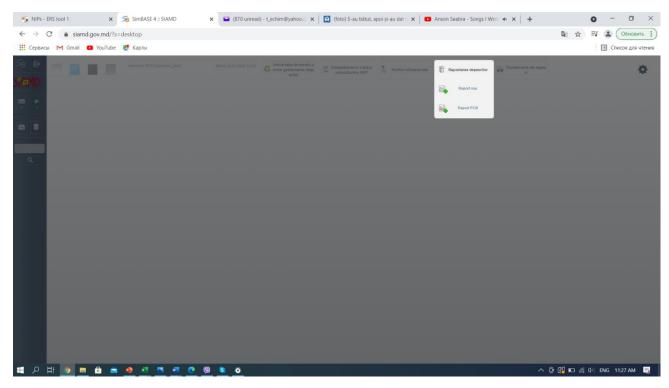


FIGURE 3 PCB REPORTING REGISTRATION

<sup>&</sup>lt;sup>5</sup> https://www.legis.md/cautare/getResults?doc\_id=119567&lang=ro

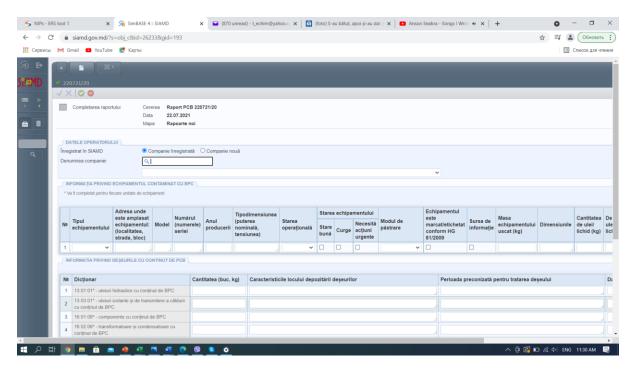


FIGURE 4. PCB REPORTING FORMAT

# 1.3.4. Navigating WM AIS portal

WM AIS performs its specific functions through the following **functional contours:** 

- 1) the "Administration and control" outline, which involves the following functions:
  - a) registration-administration of system users;
  - b) creating the user role and determining the access rights to the system functionalities;
  - c) administration of normative information;
  - d) configuration of system parameters;
- e) administration and maintenance of the waste database, of the SIA "MD", including the List of producers of products subject to the extended producer responsibility regulations;
- 2) the outline "Evidence of permissive acts", which involves the following functions:
- a) collection of notifications for transboundary shipments of waste, including hazardous waste, in accordance with the Instruction on completing the notification, approved by Order of the Minister of Ecology, Construction and Territorial Development no. 233 of November 10, 2003 regarding the implementation of the provisions of the Government Decision no. 637 of May 27, 2003;
- b) elaboration of documents for decisions to issue notifications of waste shipments, including hazardous ones, in accordance with point 1 of the Instruction on completing the notification, approved

by Order of the Minister of Ecology, Construction and Territorial Development no. 233 of November 10, 2003 regarding the implementation of the provisions of the Government Decision no. 637 of May 27, 2003;

- c) the approval by the Inspectorate for Environmental Protection of the requests for the issuance of environmental permits for waste management, in accordance with art. 25 para. (8) of Law no. 209 of July 29, 2016 on waste;
- d) elaboration of decisions for issuing environmental permits for waste management, in accordance with art. 25 para. (9) of Law no. 209 of July 29, 2016 on waste;
- e) elaboration of the decisions for withdrawal of the authorization or of the notification, according to art. 25 para. (9) of Law no. 209 of July 29, 2016 on waste, in case of violation by the holder of the provisions of the legislation and the conditions of the authorization, in accordance with the provisions of Law no. 235-XVI of July 20, 2006 regarding the basic principles of regulating the entrepreneurial activity and of Law no. 160 of July 22, 2011 on the regulation by authorization of the entrepreneurial activity;
  - f) registration / deletion of permissive documents in / from the Register of permissive documents;
  - g) registration of notifications
- 3) the "Monitoring and reporting" outline, which involves the following functions:
  - a) generation of analytical reports on waste, data and information on waste;
- b) generation of statistical reports on the quantities of waste collected, transported, recovered and disposed of;
  - c) publishing information on annual waste reporting procedures;
  - d) publishing information on the procedures for obtaining permissive documents.

WM AIS provide an ergonomic, intuitive and accessible interface for all types of users. Depending on the user (their rights and roles) SIMD will provide a unique interface to each user.

By default, SI users will have the following levels of access to the program interface:

- **Internet User access level** is the access level through the public WEB interface that contains all the functionalities necessary to explore the public compartment of the IS.
- Authorized access / reporter access level is the authorized access level via username + password and / or digital certificate to the WEB interface characteristic of the registration applicant, authorization / permit, or reporter with a minimum set of functionalities that will allows the drafting and sending of applications for authorization, or the viewing of all notifications received and decisions related to the applicant adopted by the PA involved in the process of authorization and receipt of reports.
- **Public Authority official access level** characteristic level of AP officials involved in the waste management authorization process, who will authorize access by user + password and / or digital certificate. This type of users will process all requests sent by authorization applicants.

- Administrator access level - level characteristic of the highest level user. They will authorize their access by digital certificate and physical connection location. This level, given its role of managing the proper functioning of the IT solution, will ensure access to all the functionalities of the user interface and the content of the database delivered by the user interface.

# 1.4. Automatic Information System "Registry of chemicals placed on the Moldovan market"

The automated information system "Register of chemicals placed on the market of the Republic of Moldova" (hereinafter - SIA "REPC") forms the specialized information resource on chemicals placed on the market of the Republic of Moldova. AIS "REPC" will allow the management of chemical registration processes, receipt and processing of annual reports of chemical producers and importers, as well as authorization to place chemicals on the market in the Republic of Moldova, significantly increasing the efficiency of interaction between public authorities involved in the process of management and monitoring of chemicals.

The technical concept of the system was elaborated according to Governmental Decision no. 535/2020<sup>6</sup> and currently is being piloted by the Ministry of Agriculture, Regional Development and Environment. As soon as the Chemicals agency will be established, it will become the possessor of the system.

One of its layers shall be "Export and import of hazardous chemicals" which will serve as platform for submitting an export notification and it shall have the following functions:

- 1) Collection of Export Notifications of chemicals in accordance with the Regulation on the import and export of hazardous chemicals;
- 2) Approval by the National Agency of the requests for the issuance of the prior import consent in accordance with the Regulation on the import and export of hazardous chemicals;
- 3) Generation of documents for Decisions to issue the prior import consent;
- 4) Registration of export notifications.

The export notification shall be a permissive act.

Since most of the POPs have already been prohibited, the system will render information regarding the POPs substances – pure (according to CAS numbers) or potential POPs presence in substances or in mixtures.

<sup>&</sup>lt;sup>6</sup> https://www.legis.md/cautare/getResults?doc\_id=122470&lang=ro\_

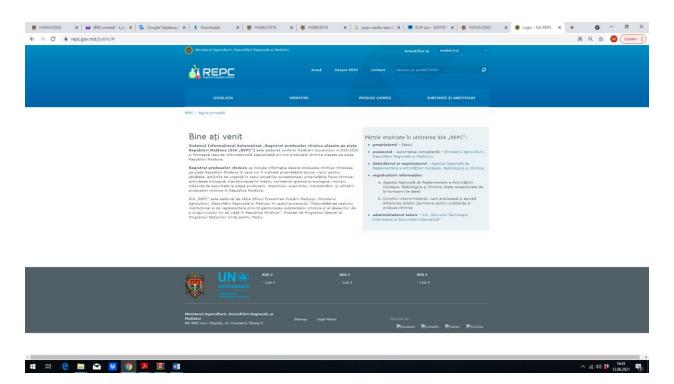


FIGURE 5 AIS REPC INTERFACE

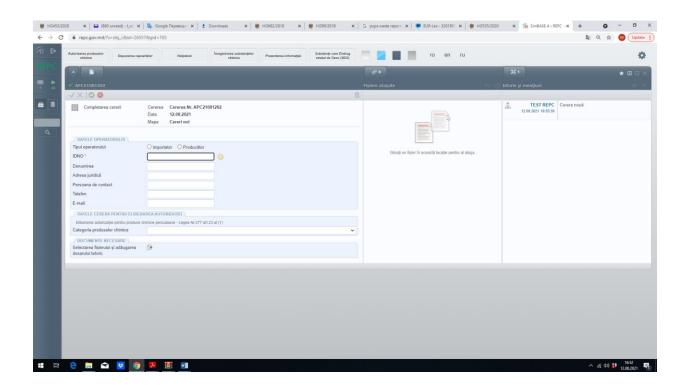


FIGURE 6 REPC SYSTEM INTERFACE FOR BUSINESS OPERATOR ON CHEMICALS / PRODUCTS REGISTRATION

# Conclusions

Reporting as per Article 15 of the Stockholm Convention on POPs requires national coordination and the collection of information and data from multiple stakeholders, including different line ministries and agencies, non-state actors and research specialists.

Even through Republic of Moldova has experienced certain delays under the SC reporting, due to numerous reasons, starting from the institutional reforms and also lack of the national inventories for specific POPs substances (particularly new POPs), another important reason was the insufficient and fragmented cooperation between these stakeholders on data gathering and synthesis, that has delayed the gathering of the needed information for national reports and NIP updating. In addition, during the previous year, in absence of a structured NIP transmission template parties, sometime and effort on data compilation was less relevant and efficient.

Challenges that were identified and that needed to be addressed to reduce the workload and to make national reporting processes more efficient include:

- The submission of the same kind of information to multiple agreements (according to different reporting cycles and different responsibilities in countries);
- Information and data needed for reporting are scattered in numerous places within the internet and are not all easily accessible;
- Organizing and maintaining national information in a way that facilitates the re-use of information under multiple agreements.

Being aware of these issues, along with the framework governmental program on digitalization of the public services and development of online reporting and data management tools, under the MCloud platform, starting with 2017 Moldovan line authorities have made significant developments in creation automatic information systems for environmental data reporting under the chemicals and waste and namely:

- Waste management information system www.siamd.gov.md
- Pollutant Release and Transfer register system <u>www.retp.gov.md</u>
- Chemicals Products placed at the market register (at piloting phase) www.repc.gov.md

Currently, a framework for ensuring collaboration on chemicals and waste management between the central authorities in the field of environmental protection, agriculture, health, economy, industry, statistics has improved, particularly because certain information is already available / in the process of being gathered and uploaded. The benefits of using of the mentioned above existing national online register/ system, also having the NIP transmission template, shall contribute in upcoming future for:

- identification and retrieval of relevant chemicals and waste information for reporting purposes;
- organizing/curating the information and reference documents for a specific report;
- supporting the analysis of national information against the MEAs, including as well the SDGs framework;
- providing the use of the same working space by several reporters/ data users:
- facilitating interministerial communication and cooperation at the national level.

The IT solution that is currently being developed/ piloted under the auspices of environmental authorities in order to comply with the reporting obligations under the Article 15 of the Stockholm Convention on POPs it is crucial for the country to improve the tools, technical knowledge, organization of the data collected and financial support to execute the required activities (e.g. desk study, surveys, data analysis). Due to limited expertise at the national authorities' level, the continuous support from neighbour countries and international actors is crucial for the Republic of Moldova in order to progress.