



# PRTR ESTABLISHMENT IN THE REPUBLIC OF MOLDOVA

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**Tatiana Țugui, manager**


EPPO Ministry of Agriculture, Regional Development and  
Environment of the Republic of Moldova

Final project workshop

25-27 March 2019



# Technical assistance for PRTR establishment



QSP SAICM „Strengthening capacities for the development of the national Pollutant Release and Transfer Registers (PRTR) and supporting SAICM implementation in two countries with economy in transition: the Republic of Moldova and the Republic of Macedonia”



GEF/UNITAR „Global Project on the Implementation of PRTRs as a tool for POPs reporting, dissemination and awareness raising for Belarus, Cambodia, Ecuador, Kazakhstan, Moldova and Peru”



# Steps in establishment of the PRTR system in Moldova

## I. Approval of the legal and regulatory framework

- Law no. 99 of 26.04.2013 on ratification of the Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, Justice and Public Participation in Environmental Decisions
- Regulation on the implementation of the National Registry for Pollutant Emissions and Transfer

## II. Establishment of the PRTR infrastructure

- Development of the Concept of the Automatic Informational System „Pollutant Release and Transfer Registry” – AIS PRTR
- Development of the AIS PRTR software

## III. Capacity building

- Training of the business/local and central authorities/civil society
- Piloting AIS PRTR

## IV. Reporting

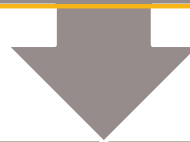
- Report on Pollutant Emissions and Transfer to the Secretariat of the Kiev Protocol
- Reporting to Stockholm, UNFCCC, CLRTAP, Minamata Conventions



# Institutional arrangements

Ministry of Agriculture, Regional Development and  
Environment

([www.madrm.gov.md](http://www.madrm.gov.md))



Environmental Agency

([www.mediu.gov.md](http://www.mediu.gov.md))



Pollutants Release and Transfer Register Information  
System ([www.retp.gov.md](http://www.retp.gov.md))



# Governmental Decision on approval of the:

Regulation on the implementation of the National Pollutant Release and Transfer Registry

establishes the necessary institutional framework for setting up and regulating the National Emissions and Pollutant Transfer Register

Concept of the Automatic Informational System „National Pollutant Release and Transfer Registry” – AIS PRTR

establishes the objectives, purpose, principles, legal framework, basic functional characteristics and architecture of PRTR information system



# Regulation on the implementation of the National Pollutant Release and Transfer Registry

Transposes the Regulation (EC) No. 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689 / EEC and 96/61 / EC

Contains provisions related to:

Subjects of legal relations in the field of creation and use of the National Registry

Structure, principles of creation and maintenance the National Registry

Collection, presentation and validation the data in the National Registry

Access to information, public participation and access to justice in env. matters

Monitoring of emissions



# Subjects of National Registry

## a) Data suppliers:

**1) Central and local public environment authorities and subordinated institutions**

**2) Agency "Apele Moldovei", National Agency for Food Safety, Public Services Agency, National Bureau of Statistics**

**3) Economic operators**

## b) Data users:

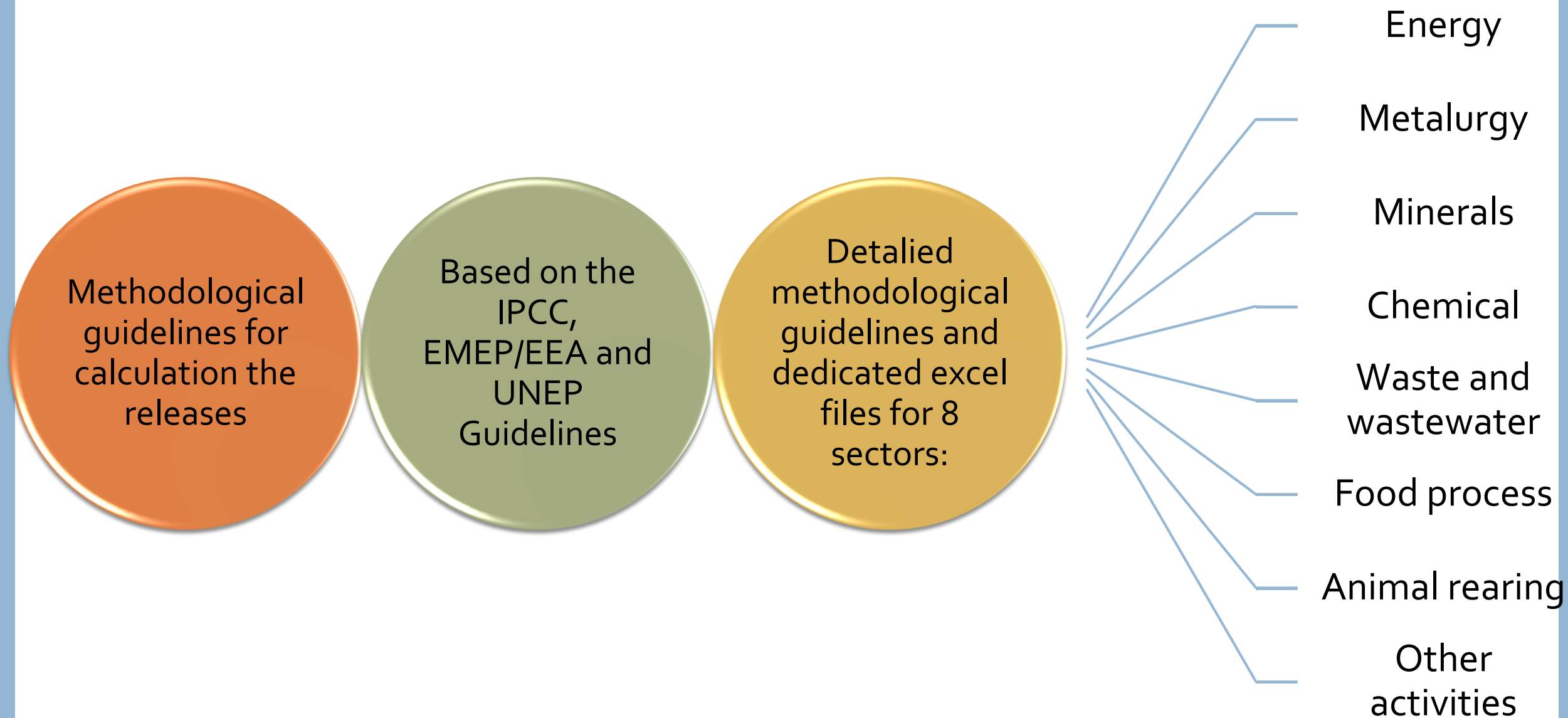
**1) Central and local public environment authorities and subordinated institutions**

**3) Economic operators**

**4) Civil society**



## Releases to air from stationary sources:





# Methodological guidelines for each sector contain the following chapters:

Overview	General description	
	Process description	
	Techniques	
	Emission and abatements systems	
Methods	Level 1	Algorithm
		Emission factors
		Activity data
	Level 2	Algorithm
		Emission factors
		Abatement systems
		Activity data
References		



Methodology for the calculation  
of pollutants releases into the atmosphere  
to be applied in the Republic of Moldova  
for the PRTR reporting

Ghid metodologic privind calculul  
emisiilor de poluanți în aer pentru  
raportare în RETP

SECTORUL ENERGETIC

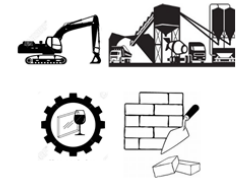
- (a) Rafinării de petrol și gaze  
(c) Centrale termice și alte instalații de ardere  
(d) Cuptoare de cocs  
(f) Instalații de fabricare a produselor din cărbune și a combustibilului  
solid nefumigen



GHID METODOLOGIC PRIVIND CALCULUL  
EMISIILOR DE POLUANȚI ÎN AER PENTRU  
RAPORTARE ÎN RETP

Sectorul 3 Industria minereurilor

- 3(b) Exploatarea minieră de suprafață și de carieră  
3(c)(i) Instalații de producere a clincherului de ciment în cuptoare rotative  
3(c)(ii) Instalații de producție de var în cuptoare rotative  
3(e) Instalații de fabricare a sticlei, inclusiv a fibrelor de sticlă  
3(g) Instalații de fabricare a produselor ceramice prin ardere, în special a țiglelor,  
cărămizilor, cărămizilor refractare, plăcilor ceramice, gresurilor ceramice, și  
porțelanurilor



GHID METODOLOGIC  
PRIVIND CALCULUL EMISIILOR DE POLUANȚI  
ÎN AER PENTRU RAPORTARE ÎN RETP

SECTORUL 2  
PRODUCȚIA ȘI PRELUCRAREA METALELOR

- 2(a) Instalații de prajire sau sinterizare a minereului metalic (inclusiv a minereului cu  
conținut de sulf)  
2(b) Instalații de producere a fontei brute sau a oțelului (topire primară sau secundară),  
inclusiv instalații de turnare continuă  
2(c)(i) Laminare la cald  
2(d) Turnătorii de metale feroase  
2(e) (i) Instalații de producție de metale brute neferoase din minereuri, concentrate  
sau materii prime secundare prin procese metalurgice, chimice sau electrolitice  
2(e) (ii) Instalații de topire, inclusiv aliajele, a metalelor neferoase, inclusiv produse  
recuperate (rafinare, piese turnate etc.)  
2(f) Instalații de tratare a suprafețelor din metal și din materiale plastice utilizând un  
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**CALCULUL EMISIILOR DE N2O DE LA TRATAREA APELOR UZATE PENTRU RAPORTAREA ÎN CADRUL RETP**

Denumirea instalației: \_\_\_\_\_  
Adresa: \_\_\_\_\_  
Anul de raportare: \_\_\_\_\_

Note: \_\_\_\_\_

**EMISI ÎN AER**

Categorie		Stații de epurare a apelor uzate urbane									
Codul Categoriei		5 (f)									
Nr. poluantului RETP	Poluant	A	B	C	D	E	F	G	H	I	
		Numerul de locuitori deserviți de stația de tratare	consumul anual de proteine pe cap de locuitor	Fracția azotului în proteine	Factorul de corecție pentru proteinele neconsumate adăugate la apele uzate, fluoriden	Factorul de corecție pentru proteinele devenite în canalizare din sectorul industrial și cel comercial	azotul eliminat cu nămol	Factor de emisie	Raportul stoichiometric între conținutul azotului în N2O-N și N2O 44/28		Emission N2O
		(locuitori)	(kg/boc/an)	(kg/boc/an)	(fracție)	(fracție)	(kg N/an)	(kg N2O44/28/N)	(fracție)	(g)	
										$I = ((A/B) * C * D * E * F * H) / I$	
5	N2O	700 000,00	25,70	0,18	1,4	1,25	0,00	0,004	1,571428571		41 118,0

În celula galbenă introduceți datele de activitate  
Введите данные активности в желтой ячейке

În celula verde rezultatul se va calcula automat  
В зеленой ячейке результат будет автоматически рассчитан

**CALCULUL EMISIILOR DE CH4 DE LA TRATAREA APELOR UZATE PENTRU RAPORTAREA ÎN CADRUL RETP**

Denumirea instalației: \_\_\_\_\_  
Adresa: \_\_\_\_\_  
Anul de raportare: \_\_\_\_\_

Note: \_\_\_\_\_

**EMISI ÎN AER**

Categorie		Stații de epurare a apelor uzate urbane									
Codul Categoriei		5 (f)									
Nr. poluantului RETP	Poluant	Tipul sistemelor	Sisteme de tratare și evacuare a apelor reziduale	B	C	D	E	F	G		
				Bo	MCF	Numărul de locuitori deserviți de stația de tratare	CBO	Nămol îndepărtat	Emission de metan recuperate de la tratarea apelor	Emission CH4	
				(kg CH4/kg CBO)	(fracție)	(locuitori)	(kg CBO/locuitor/an)	(kg CBO/an)	(kg CH4/an)	(g)	
										$G = (A * B * C * D * E * F)$	
1	CH4	Sisteme fără tratare apelor reziduale	Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	0,00	27,38	0	0	0,0	
			Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	0,00	27,38	0	0	0,0	
			Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	0,00	27,38	0	0	0,0	
			Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	0,00	27,38	0	0	0,0	
			Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	0,00	27,38	0	0	0,0	
		Sisteme cu tratare apelor reziduale	Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	700 000,00	27,38	0	0	1 149 750,0	
			Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	700 000,00	27,38	0	0	1 149 750,0	
			Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	700 000,00	27,38	0	0	1 149 750,0	
			Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	700 000,00	27,38	0	0	1 149 750,0	
			Sisteme de epurare centralizată cu rețea de salinuri de salinuri	0,0	0,1	700 000,00	27,38	0	0	1 149 750,0	
Total					700 000	110	0	0	1 149 750,0		

Alegeți tipul sistemului de tratare a apelor reziduale  
Выберите тип системы очистки сточных вод

În celula galbenă introduceți datele de activitate  
Введите данные активности в желтой ячейке

În celula verde rezultatul se va calcula automat  
В зеленой ячейке результат будет автоматически рассчитан

**CALCULATION OF EMISSIONS FROM 1A1a ( Public electricity and heat production ) FOR REPORTING UNDER THE EUROPEAN PRTR**

Facility Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Reporting year: \_\_\_\_\_

Note: \_\_\_\_\_

**RELEASE TO AIR**

Category 1A1a Public electricity and heat production  
Category Code NFR 1A1a  
Methodology Tier 1 emission factors for source category 1.A.1.a using gaseous fuels

Fuel Consumption  
A3  
Gaseous fuels  
(GJ)

Enter fuel consumption in GJ per year (GJ/yr) 50 enter figure

Not estimated (NE) NH3, PCBs, HCB

Guide	PRTR Pollutant Number	Pollutant	Emission Factor	Unit	Pollutant Emissions	Unit
			B3		C3	
			Gaseous fuels			
			Table 3-4 Tier 1 emission factors for source category 1.A.1.a using gaseous fuels			
			$C3 = (A3 * B3)$			
EMEP-2016, L1	8	NOx	89	g/GJ	4450	g
section 1A1a	2	CO	39	g/GJ	1950	g
	7	NM/OC	2,6	g/GJ	130	g
	11	SOx	0,281	g/GJ	14,05	g
	102	TSP	0,89	g/GJ	44,5	g
	36	PM10	0,89	g/GJ	44,5	g
	100	PM2,5	0,89	g/GJ	44,5	g

**Category Installations for the manufacture of glass, including glass fibre (with a melting capacity of 20 tons per day)**

Category Code 3(e)  
Methodology Tier 1 (process emissions)

PRTR Pollutant Number	Pollutant	A	B	C
		Mass of Glass Produced (tonne)	Emission Factor for Glass Manufacturing (g/tonne glass)	Pollutant Emissions (kg)
				$C = (A * B) / 10^3$
17	As			0,19
18	Cd			0,13
19	Cr			0,23
20	Cu			0,007
21	Hg			0,003
22	Ni			0,49
23	Pb			1,7
24	Zn			0,37
NA	Se			0,8
86	PM10			270
100	PM2.5			240
101	BC		0.062% of PM2.5	0,0
102	TSP			300

În celula galbenă introduceți datele de activitate  
Введите данные активности в желтой ячейке

În celula verde rezultatul se va calcula automat  
В зеленой ячейке результат будет автоматически рассчитан



# Releases to water

based on measurements

**(Regulation on requirements for the collection, treatment and discharge of wastewater into the sewage system and / or in water bodies in urban and rural areas (GD No. 950 of 25.11.2013) )**



# Transfer of waste

based on European waste classification

(Instruction on keeping records on  
waste generation and management -  
GD no 501 of 29.05.2018

List of waste - approved by GD 99 of  
30.01.2018





unauthorized  
landfills



emissions from  
transport means



agricultural  
activities (use of  
pesticides and  
fertilizers)



livestock farms  
with non-organized  
wastewater  
discharges on their  
surface

Diffuse sources: (proposed to be calculated on the basis of IPCC and EMEP/EEA guidelines, basing on statistical data/regional profile)



**Guide to  
facilitating the  
Implementation  
of the National  
Emissions and  
Pollutant  
Transfer  
Registry**

*(developed based on  
E-PRTR guidance  
document)*

reporting procedures;

---

the reporting forms for pollutant release data and off-site transfers;

---

procedures for assessing and assuring the quality of collected and reported data;

---

indications of the type of data not provided and the reasons why they were not provided in the case of confidential data;

---

methods for determining and analyzing emissions and methods of sampling, approved at international and national levels;

---

the coding of activities according to Annex no. 1 and the legislation on full environmental control.

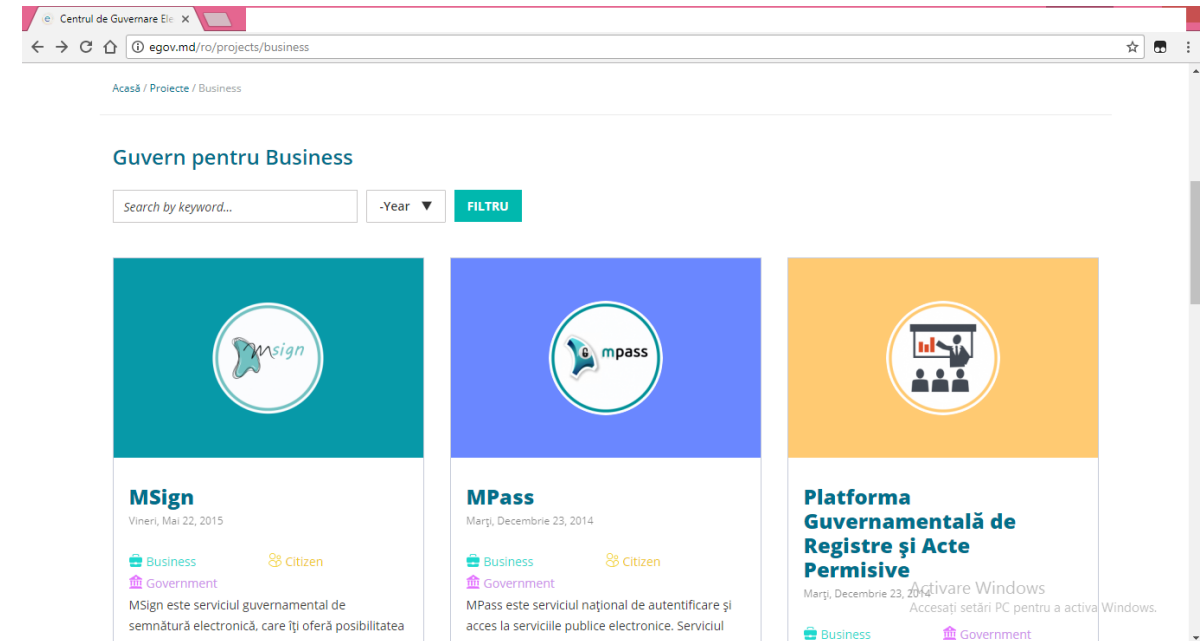
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AIS PRTR is hosted by the governmental technological platform Mcloud

It is interconnected with other governmental services MPass, MSign, MLog)





# www.retp.gov.md

←

→

https://retp.gov.md/#/

↻


Căutare...

🏠

★


⚙️

SIA RETP



RETP  
REPUBLICA MOLDOVA

National Pollutant Release and Transfer Register



Ministerul Agriculturii,  
Dezvoltării Regionale și  
Mediului

[Home](#) [Search](#) [Emissions](#) [About RETP](#) [FAQ](#) [Contacts](#)

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## Welcome

The National Pollutant Release and Transfer Register is systematised data on emissions of pollutants into air, water, soil and diffuse sources as well as off-site transfers of waste and of pollutants in waste water reported by the industrial operators carrying out one or more of the activities.

The overall objective of PRTR is to create an informational resource of information on environmental pollution, emissions to the air, water, soil and diffuse sources and the transfer of waste and pollutants, as well as to facilitate the access of decision-makers, public institutions, economic agents and the general public to this information.

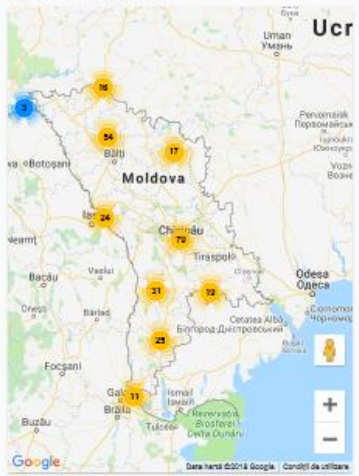
The Pollutant Release and Transfer Register was developed by the Environmental Pollution Prevention Office, within the Ministry of Agriculture, Regional Development and Agriculture, with the support of the following projects:

- Global Project on the implementation of PRTRs as a tool for POPs reporting, dissemination and awareness-raising for Belarus, Cambodia, Ecuador, Kazakhstan, Moldova and Peru (GEF/UNEP/UNITAR)
- Strengthening capacities for the development of the national Pollutant Release and Transfer Registers (PRTR) and supporting SAICM implementation in two countries with economy in transition: the Republic of Moldova and the Republic of Macedonia (SAICM QSP Trust Fund)

🔍 Search the register

[FACILITY LEVEL](#) [INDUSTRIAL ACTIVITY](#)

## RETP Facilities





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Activare Windows

Accesați setări PC pentru a activa Windows.



# Publicly available information about an installation: name and location on map

Browser address bar: <https://retp.gov.md/#/facility/29>

Facility Level Instalții

**RETP** REPUBLICA MOLDOVA

Registrul național al emisiilor și al transferului de poluanți

Guvernul Republicii Moldova  
Ministerul Agriculturii,  
Dezvoltării Regionale și  
Mediului

Acasă Căutare Emisii difuze Despre RETP Întrebări frecvente Contacte Descărcări Cadru legal Bibliotecă Limbă Cont

Instalație: "TERMOELECTRICA" S.A. CT nr. 6081

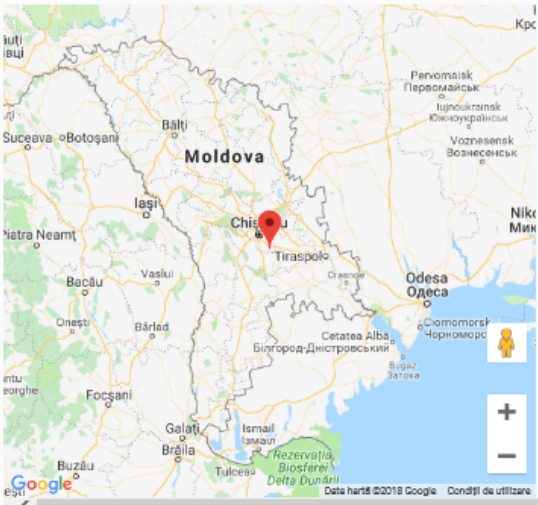
Anul de raportare: 2017

Detalii instalație Emisii de poluanți Transferuri de poluanți Transferuri de deșeuri Confidențialitatea

**Detalii instalație**

**Denumirea instalației** "TERMOELECTRICA" S.A. CT nr. 6081

**Address** mun. Chișinău, or. Dobrogea, str. I. Creangă, 5/1



Map showing the location of the installation in Chișinău, Moldova. The map includes labels for major cities like Chișinău, Tiraspol, and Odessa, and the Black Sea.

Logos: gef, UN environment, unitar, saicm, eppo

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Activare Windows  
Accesați setări PC pentru a activa Windows.



# Publicly available information about an installation: release of pollutants to air

Browser address bar: <https://retp.gov.md/#/facility/29>

Facility Level Instalții

**RETP** REPUBLICA MOLDOVA

Registrul național al emisiilor și al transferului de poluanți

Guvernul Republicii Moldova  
Ministerul Agriculturii, Dezvoltării Regionale și Mediului

Acasă Căutare Emisii difuze Despre RETP Întrebări frecvente Contacte Descărcări Cadru legal Bibliotecă Limbă Cont

## Instalație: "TERMOELECTRICA" S.A. CT nr. 6081

Anul de raportare: 2017

Detalii instalație **Emisii de poluanți** Transferuri de poluanți Transferuri de deșuri Confidențialitatea

### Emisii în aer

Nume poluant	Total	Metoda	Metodă utilizată
Oxizi de azot (NOx/NO2)	858.5831136	CALCULATION	
Monoxid de carbon (CO)	643.9373352	CALCULATION	
Compuși organici volatili nemetanici (NMVOC)	42.92915568	CALCULATION	
Oxizi de sulf (SOx/SO2)	6.439373352	CALCULATION	
Total de pulberi în suspensie (TSP)	9.659060028	CALCULATION	
Particule (PM10)	9.659060028	CALCULATION	
PM2.5	9.659060028	CALCULATION	
Negru de fum (BC)	0.521589242	CALCULATION	
Plumb și compuși (exprimați în Pb)	0.0000321969	CALCULATION	
Cadmium și compuși (exprimați în Cd)	0.00000536614	CALCULATION	
Mercur și compuși (exprimați în Hg)	0.002146458	CALCULATION	
Arsenic și compuși (exprimați în As)	0.002575749	CALCULATION	
Crom și compuși (exprimați în Cr)	0.0000163131	CALCULATION	
Cupru și compuși (exprimați în Cu)	0.00000163131	CALCULATION	
Nichel și compuși (exprimați în Ni)	0.0000109469	CALCULATION	
Zinc și compuși (exprimați în Zn)	0.0000321969	CALCULATION	
PCDD + PCDF (dioxine și furani) (exprimați în Teq)	1.07323e-8	CALCULATION	
Hidrocarburi aromatice policiclice (HAP)	0.0000661109	CALCULATION	

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# Publicly available information: total releases to air

← →

https://retp.gov.md/#/search/by-activity

🔒 ↻

Căutare...

🏠 ★ ⚙️

Facility Level

Activitatea industrială

RETP

REPUBLICA MOLDOVA

Registrul național al emisiilor și al transferului de poluanți

Guvernul Republicii Moldova

Ministerul Agriculturii, Dezvoltării Regionale și Mediului

🏠 Acasă

🔍 Căutare

📊 Emisii difuze

ℹ️ Despre RETP

💬 Întrebări frecvente

📧 Contacte

📄 Descărcări

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📚 Bibliotecă

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👤 Cont

Activitatea industrială

🔍 Caută

✖️ Curăță

An

2017

Activitate

Sector

Activități

Sub-activități

Emisii de poluanți

Denumirea instalației	Instalații	Aer (kg)	Apă (kg)	Sol (kg)
Metan (CH4)	78	1954489.0403	-	-
Monoxid de carbon (CO)	62	218402.6114	-	-
Dioxid de carbon (CO2)	69	753019268.5051	-	-
Hidrofluorocarburi (HFC)	1	9.2000	-	-
Protoxid de azot (N2O)	60	34700138.0879	-	-
Amoniac (NH3)	6	21602.4586	-	-
Compuși organici volatili nemetanici (NMVOC)	88	782949.1989	-	-
Oxizi de azot (NOx/NO2)	61	818502.2224	-	-
Hexafluorură de sulf (SF6)	1	5.6000	-	-
Oxizi de sulf (SOx/SO2)	58	19837.0050	-	-
Azot total	2	1.0000	4928.3700	-
Fosfor total	2	688.0745	688.0745	-
Arsenic și compuși (exprimați în As)	58	1.7596	-	-

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# Industrial operator reporting interface: Air



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REPUBLICA MOLDOVA

National Pollutant Release and Transfer Register

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Water

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Waste shipment

Report - Sector 1 (c) (i) - Centrale termice de capacitate mare

Descărcați fișiere de calcul și ghidul metodologic

Nume:	Versiune din:	
Ghid metodologic: Centrale termice de capacitate mare	3 sept. 2018, 14:27:12	Download
Fișier de calcul: Centrale termice de capacitate mare	14 nov. 2018, 21:40:42	Download

Încărcați fișiere cu calcule efectuate pentru a fi verificate ulterior de către un funcționar din cadrul EPPD.

Selectează fișier cu calcule

Browse

Încarcă

Nume	Versiune din:	
Peco-2018-2017.xls	20 nov. 2018, 16:02:33	Download Delete

Informație

La completarea tabelului de mai jos, precizați metoda de determinare a emisiilor de poluanți în aer: **Măsurat, Calculat, Estimat.**

În cazul măsurării emisiilor, media anuală a datelor măsurate se introduce în rubrica **Măsurat** coloanța (c), iar valoarea anuală se introduce în coloanța (d), cu indicarea metodei de măsurare în coloanța (e). Metoda de măsurare poate fi găsită în Anexa nr. 4 la Regulamentul privind Registrul național al emisiilor și al transferului de poluanți, aprobat prin HG nr. 373 din 24.04.2018.

În cazul calculului emisiilor cu ajutorul fișierului de calcul, datele se introduc în rubrica **Calculat**, coloanța (f), cu indicarea metodei de calcul în coloanța (g). Metoda de calcul poate fi găsită în Anexa nr. 4 la Regulamentul privind Registrul național al emisiilor și al transferului de poluanți, aprobat prin HG nr. 373 din 24.04.2018.

În cazul accidentelor, datele estimate ale emisiilor se introduc în rubrica **Estimat**, coloanța (h), cu indicarea metodei de estimare în coloanța (i).

Nr. poluant (a)	Denumirea poluantului (b)	Emis în timpul funcționării normale a instalației			Emis în timpul accidentelor			
		Măsurat		Metoda de măsurare (e)	Calculat		Estimat	
		Media anuală datelor măsurate mg/sec (c)	Valoarea anuală kg/an (d)		kg/an (f)	Metoda de calcul (g)	kg/an (h)	Metoda de estimare (i)
	Poluant			ISO Standard				



# Industrial operator reporting interface: Water

✓ Reports

⚙ Facilities

+ Add report

Air

Water

Soil

Waste shipment

## Raport emisii apa pentru:Peco

Introduceți datele privind apele uzate generate:

Tipul apelor	Cantitatea	Unitatea de măsură	Metoda de determinare
Ape uzate generate			
Ape uzate epurate			
Ape uzate reutilizate			
Ape uzate evacuate într-un emisar			
Ape uzate transferate la stația de epurare a apelor uzate			

În cazul măsurării emisiilor, datele, inclusiv valorile trimestriale și media anuală, în baza căreia se determină valoarea anuală se introduc în rubrica Măsurat, coloanța (d), cu indicarea metodei de măsurare în coloanța (e), în conformitate cu Anexa nr. 4 la Regulamentul privind Registrul național al emisiilor și al transferului de poluanți (aprobat prin HG nr. ...din ...).

În cazul accidentelor, datele estimate ale emisiilor se introduc în rubrica Estimat, coloanța (f), cu indicarea metodei de estimare în coloanța (g).

Nr. poluant (a)	Denumirea poluantului (b)	Emis în timpul funcționării normale a instalației		Emis în timpul accidentelor		Note suplimentare
		Măsurat		Estimat		
		Valoarea anuală	Metoda de măsurare			
		kg/an (c)	Metoda de măsurare (d)	Kg/an (e)	Metoda de estimare (f)	
	Poluant	Valoarea anuală			Metoda de estimare	Note suplimentare



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# Industrial operator reporting interface: Waste transfer



## National Pollutant Release and Transfer Register



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- + Add report ▾
- Air
- Water
- Soil
- Waste shipment

### Deșeuri nepericuloase

Cantitatea generata, tone/an	Metoda de determinare a cantitatii	Codul operatiunii de gestionare a deeurilor	Note suplimentare	
<input type="text"/>	<input type="text"/>	<input type="text"/>	Notice	

\*Conform Legii 209 privind deșeurile din 29.06.2016, D - eliminare, R – Valorificare.



### Deșeuri periculoase

Cantitatea generata, tone/an	Metoda de determinare a cantitatii	Codul operatiunii de gestionare a deeurilor	Transfer in afara amplasamentului	Denumirea valorificantului/eliminatorului	Adresa valorificantului/eliminatorului	Adresa amplasamentului real de valorificare/eliminare	Note suplimentare	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Notice	

\*Conform Legii 209 privind deșeurile din 29.06.2016, D - eliminare, R – Valorificare.



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Versiunea: 1



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The system will contain data on the releases into air of substances reported under MEAs

**Stockholm Convention on POPs**

**UNFCCC**

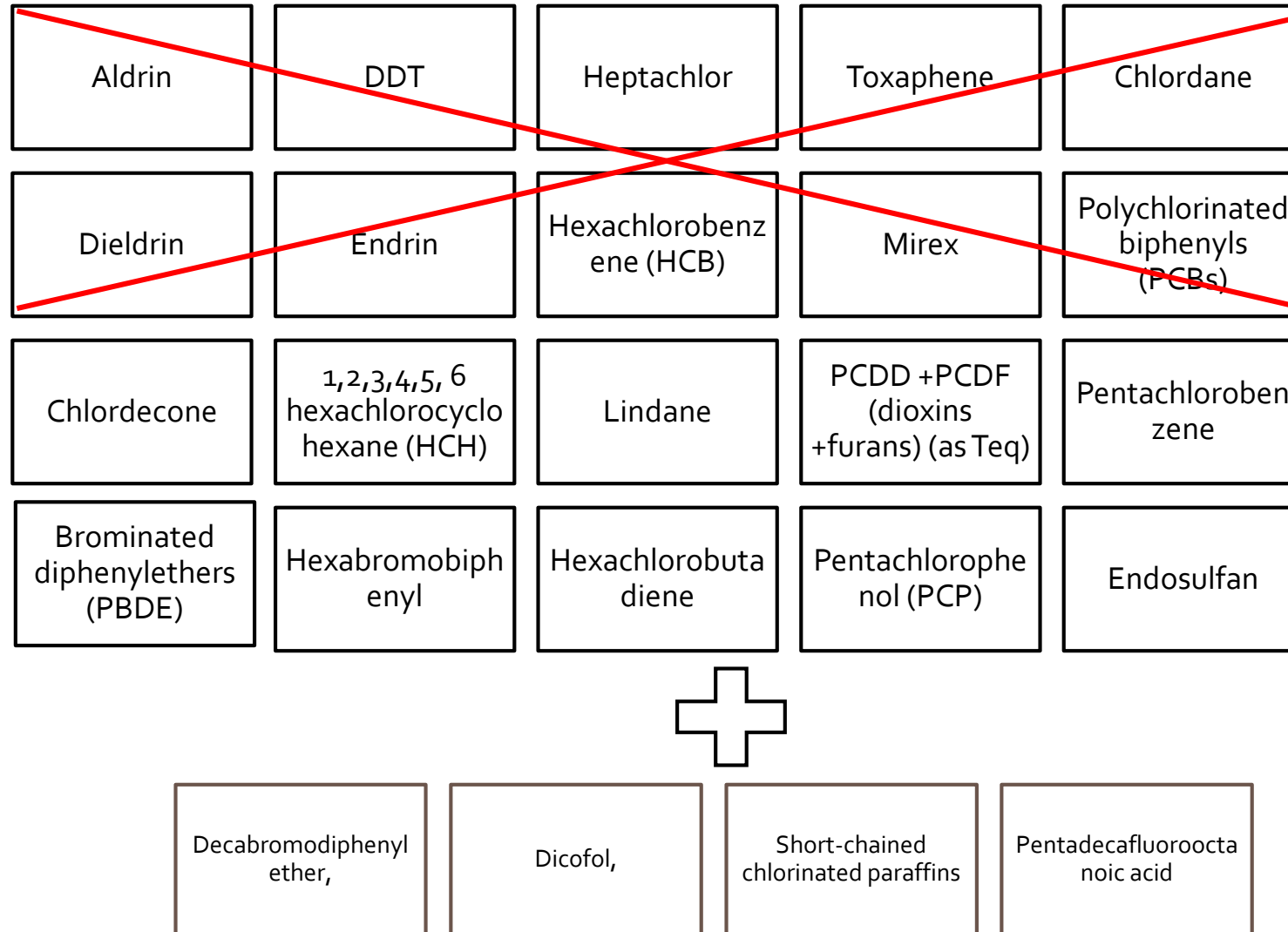
**LRTAPC**

**Montreal Protocol on Substances that Deplete the Ozone Layer**

**Minamata Convention**



# POPs to reported under the PRTR





# POPs emissions are covered by the sectors:



(1) Energy sector – thermal power stations and other combustion installations



(2) Production and processing of metals



(3) Mineral industry (Cement clinker and lime production, glass production)



(4) Chemical industry (basic plastic materials; surface-active agents and surfactants; basic pharmaceutical products)



(5) Waste (open burning of landfills)





unauthorized  
landfills (open  
burning)



emissions from  
transport means

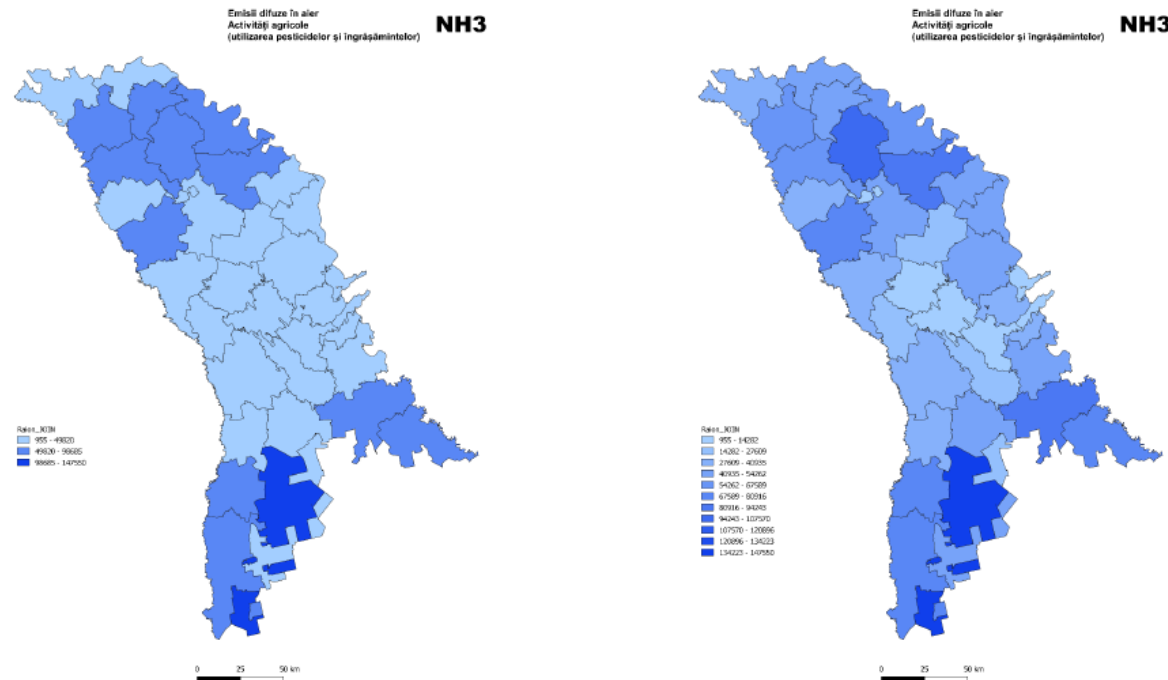


agricultural  
activities (use of  
pesticides and  
fertilizers)

**Diffuse sources under PRTR (additional source of POPs)**



# Diffuse emissions – reports completed by Environmental Agency



NH<sub>3</sub> -diffuse emission in air from agricultural activities (pesticide and fertilizers use)



```
graph LR; EMEP((EMEP/EEA)) --- PCB; EMEP --- PCDD[PCDD/F]; EMEP --- B[a]B[a]fluoranthene; EMEP --- B[b]B[b]fluoranthene; EMEP --- B[k]B[k]fluoranthene; EMEP --- HCB;
```

EMEP/EEA

PCB

PCDD/F

Benzo(a)fluoranthene

Benzo(b)fluoranthene

Benzo(k)fluoranthene

HCB



# 2017

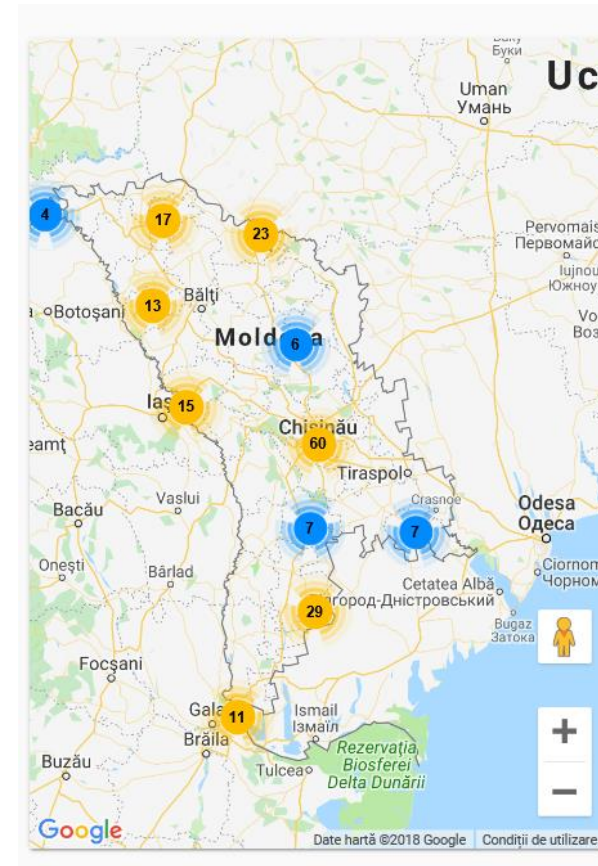
First year of PRTR reporting

75 registered economic operators

192 registered installations

162 reports submitted  
(mostly for releases to air from thermal power stations)

Reported releases to air for 30 pollutants





Name of pollutant	No of insallations	Release, tones	2017
<b>GHG and precursors</b>			
Metan (CH4)	159	3472,982	
Monoxid de carbon (CO)	75	872,545	
Dioxid de carbon (CO2)	150	1143464,878	
Hidrofluorocarburi (HFC)	1	0,00920	
Protoxid de azot (N2O)	73	7,251	
Oxizi de azot (NOx/NO2)	78	1386,765	
Compuși organici volatili nemetanici (NMVOC)	96	2067870,223	
Oxizi de sulf (SOx/SO2)	73	8040707,156	
Hexafluorură de sulf (SF6)	1	0,00560	
<b>POPs</b>			
Hexaclorbenzen (HCB)	6	0,000032	
PCDD + PCDF (dioxine și furani) (exprimați în Teq)	61	0,0000000001	
Bifenoli policlorurați (PCB)	7	0,000475	
Hidrocarburi aromatice policiclice (HAP)	58	0,00935	
Fluoranten	1	0,00000	
Benzo(g,h,i)perilen	4	0,11400	

Name of pollutant	No of insallations	Release, tones
<b>Heavy metals</b>		
Arsenic și compuși (exprimați în As)	71	0,0135
Cadmium și compuși (exprimați în Cd)	71	0,0066
Crom și compuși (exprimați în Cr)	75	0,0240
Cupru și compuși (exprimați în Cu)	75	0,0303
Mercur și compuși (exprimați în Hg)	69	0,0533
Nichel și compuși (exprimați în Ni)	68	0,0236
Plumb și compuși (exprimați în Pb)	72	0,46821
Zinc și compuși (exprimați în Zn)	75	0,3122
<b>Particles</b>		
PM2,5	72	74,303
Negru de fum (BC)	58	3,248
Total de pulberi în suspensie (TSP)	69	178,915
Particule (PM10)	95	248,872
<b>Other gases</b>		
Amoniac (NH3)	11	283,648
Azot total	10	0,00136
Fosfor total	7	0,688







# Validation procedure

Calculate the releases by using the protected Excel spreadsheet

Submission of the report, along with the completed Excel spreadsheet

Verification and validation of the spreadsheet by the sectoral experts

Validation of the report

Only calculated releases are publicly available



# Training activities

## 1st cycle

– Presenting and testing the methodology and excel files among economic operators (per sector) and inspectors

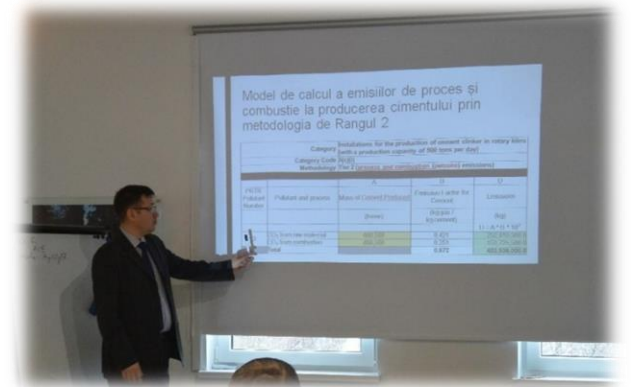
## 2nd cycle

- Testing and piloting the PRTR software among economic operators (per sector), inspectors, authorities and civil society

## 3rd cycle

- Combined training on use of the calculation spreadsheets and reporting into the system among economic operators (per district to cover a broader range of operators) and inspectors















# Main achievements

## Legal framework in place

- legally binding instrument is crucial for implementation of the PRTR system, as the voluntary reporting can lead to collapsing the system and lack of reports

Methodologies and detailed guideline for application of methodologies and calculations to be performed were developed

- The methodologies have been translated into the user-friendly on-line register

Capacity building component for the companies involved in the pilots have been realized with success

- It was highly appreciated, and more trainings of such kind should be done with these target groups.

IT reporting tool developed and tested with the user-friendly interface and detailed instructions for users elaborated (including video instructions).


- 70 companies have been registered and submitted the reports for about 200 facilities

Guide for facilitation of implementation of the National Registry of Pollutant Release and Transfer Registry has been developed

- Next steps - official approval, so that the companies can use it while submitting the reports.



# Lessons learnt



PRTR was addressed as a complex process, the efforts and resources have been combined from several on-going projects, so that the final goal to obtain the approval on the national level. This approach showed to be effective, bringing concrete results.

Awareness raising is an important direction that should be addressed on a regular basis. Mass media representatives not being experts need basic conceptual understanding of the process, its importance, possible experts to address to in case supplementary information would be needed.

High level of experts that were selected resulted in the smooth process of elaboration methodologies, that were later incorporated in the IT tool that was developed and valuable support for the companies' representatives in the process of submitting their reporting.

Awareness raising materials, publications should be produced both in digital form (for wider dissemination) and hard (paper) version that should be disseminated during the events. All produced materials should be user friendly, attractive, written in a simple language, in this case the beneficiaries will return to them after the event and remember for a longer period.

Capacity building trainings gave the possibility to test the system, identify weak points that were later improved, identify if recommendations, soft (on-line tool) that were elaborated are clear and companies can present the report. The other important aspect of capacity building trainings was collecting the feedback on the process of collecting the information and reporting. So that these pilots can be further expanded to the wider number of companies.



# Follow up

Upgrade then IT system by making it more user friendly, such as:

incorporate the calculation formulas into the system,

include databases with emission factors

incorporate convertors, for instance for fuel;

incorporate features that will track and automatically identify errors in reported data;

incorporate more reporting obligation into the system, to serve as single window;

Continue awareness raising by distribution of various materials and trainings to the representative of line ministries, economic operators and other relevant national and regional stakeholders

Assessment of application of thresholds

Fully integrate the PRTR system as reporting tool for all the releases at national level, including for application of polluter pays principle

Ensure continuous collaboration and consultation with the future users and data providers



# The national PRTR system seen by the main users ..

"Impressive results, PRTR regulation approved, guide is elaborated, the reports (piloting phase) submitted thought the system"

"...the Moldovan partner has managed in a very short period of time to develop very good PRTR register which is already involving big number of industrial stakeholders."

"EPPO team was open, transparent and professional. Trainings that were organized were highly estimated by the participants. The trainings had both theory and practice incorporated, so that was good."

"Making links between mass media and specialists PRTR helped to understand what it is about, why it is important, and what should business do, to make their processes transparent to the public."

Clear and easy to use IT tool. Good user interface, guidance. Video instructions help even those who was not present on the training events. No problem for submitting the reports in the system

"Explanations how to submit reports was clear, both on-line and during the trainings. Trainings were well-organized, information presented was clear, good-structured. Support after the training from experts was also accorded, high level of cooperation,,



# Difficulties and challenges

Identifying of the best option for legal basis took some time and involved several changes in the form of the act (Law, Regulation)

Introducing the IT system and integration into the national portal of public services (through MPass registration) took longer than expected initially, as required coordination and approval from several responsible agencies

Development of the IT reporting system was difficult, as several issues need to be taken into consideration at the initial phase. However, the piloting of the system allowed the identification of the inconsistencies and remove them.

The recently established Environmental Agency will be in charge of PRTR and the handing over of the PRTR system is a complex task involving designation and training of responsible persons

Companies were reticent to participation in trainings, even though after participation recognized the usefulness

The companies see PRTR as additional burden because they have too many requirements for reporting and in some cases, there are overlapping data



# Global project team work: **#PRTR must go on**

PRTR guru - mentors



Thank you all and wishing  
continuous support!



Thank you for your kind attention !

**Tatiana Țugui**

Environmental Pollution Prevention Office

Ministry of Agriculture Regional Development and  
Environment of the Republic of Moldova

Tel: +373 22 222 542

Email: [tatiana.tugui@eppo.md](mailto:tatiana.tugui@eppo.md)

[tuguitatiana@ymail.com](mailto:tuguitatiana@ymail.com)