Progress in establishment the PRTR System in the Republic of Moldova

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„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”

Budget: $ 190,000

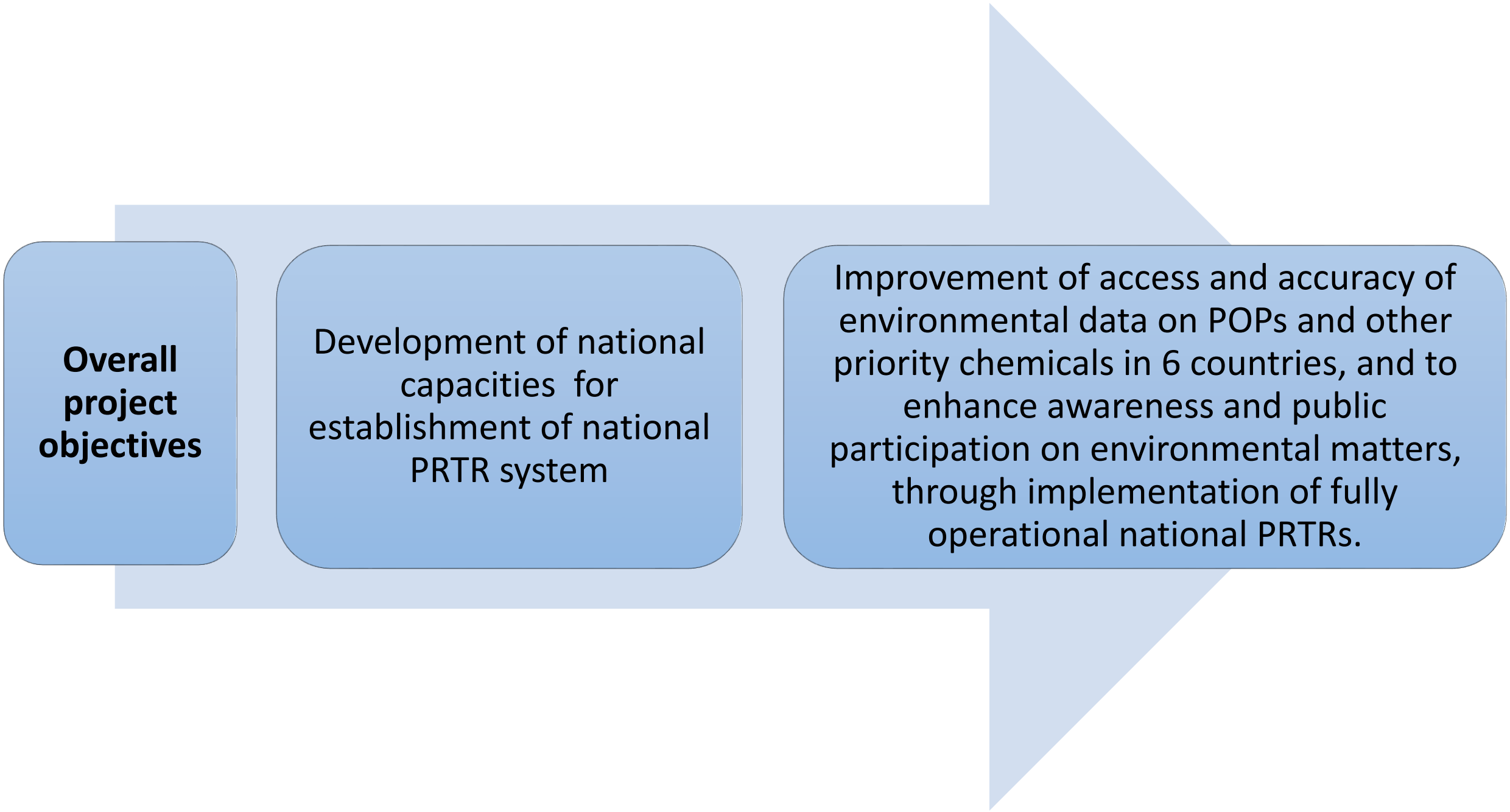
National contribution (in kind) - $ 1,183,583

Duration of implementation – 48 months

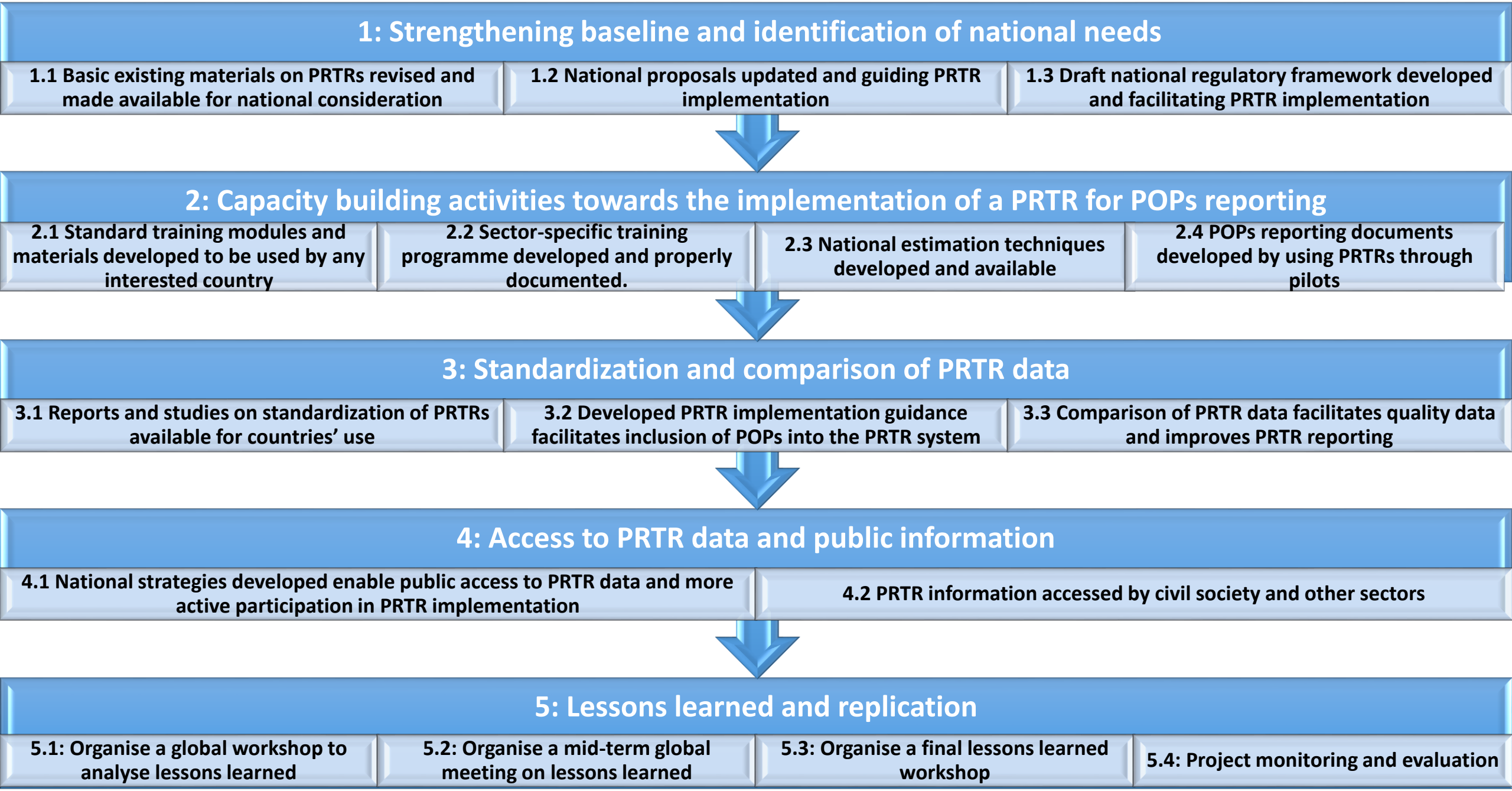
National Executing Agency - Environmental Pollution Prevention Office, Ministry of Agriculture, Regional Development and Environment of the Republic of Moldova

Implementing Agency - UNEP

Executing Agency - UNITAR


Overall project objectives
Development of national capacities for establishment of national PRTR system
Improvement of access and accuracy of environmental data on POPs and other priority chemicals in 6 countries, and to enhance awareness and public participation on environmental matters, through implementation of fully operational national PRTRs.

Project components



„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”

Financial support – UNEP QSP

Budget : $ 113689

Duration – 14 months

National Executing Agency - Environmental Pollution Prevention Office, Ministry of Agriculture, Regional Development and Environment of the Republic of Moldova

Implementing Agency – UNEP

Overall project objectives

Strengthen capacities of the Republic of Moldova and the Republic of Macedonia for implementation of the Kiev Protocol on PRTR in line with SAICM strategy

The project will assist the countries in promoting of setting up and implementation the National Pollutant Release and Transfer Register System as well as capacity building and sharing of information and experience among CEE countri

Project components

1. Designing/improving national PRTR systems in Moldova and Macedonia

- 1.1 . Setting up the objectives and key elements of the National PRTR System
- 1.2 Assessing the Existing technical Infrastructure relevant to PRTR
- 1.3 Organizing a National PRTR Review Workshops

2. Legal and institutional capacity strengthening for PRTR implementation in Moldova and Macedonia

- 2.1 Developing enforcement mechanism for the application of the national regulation on PRTR based Regulation EC nr. 166/2006 concerning the establishment of a European PRTR (Ghid PRTR)
- 2.2 Developing legal act for the methodologies approval MoE Decree (conduct multistakeholder consultation prior the estimation techniques approval by MoARDE Decree) (MD)
- 2.3 Developing/updating database of facilities / business to report under PRTR system (MD/MK)

3. Awareness raising and information activities

- 3.1 Conducting intensive consultations/ trainings with facility managers/PRTR installations (MK/MD)
- 3.2 Support the PRTR national reporting pilots for relevant sectors, including intensive ecological inspectorate training (MD)
- 3.3 Public awareness raising campaign conducted among key stakeholders (MK/MD)
- 3.4 Publication of the guidebook and relevant PRTR sector estimation methodologies (MD)

4. CEE region capacity building on PRTR

- 4.1 Conducting CEE regional seminar in Macedonia on PRTR (MD/MK+ invited countries within the region)
- 4.2 Site visit to PRTR facility as best practice sharing
- 4.3 Study tour

Establishment 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

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

Capacity building

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

Piloting AIS PRTR

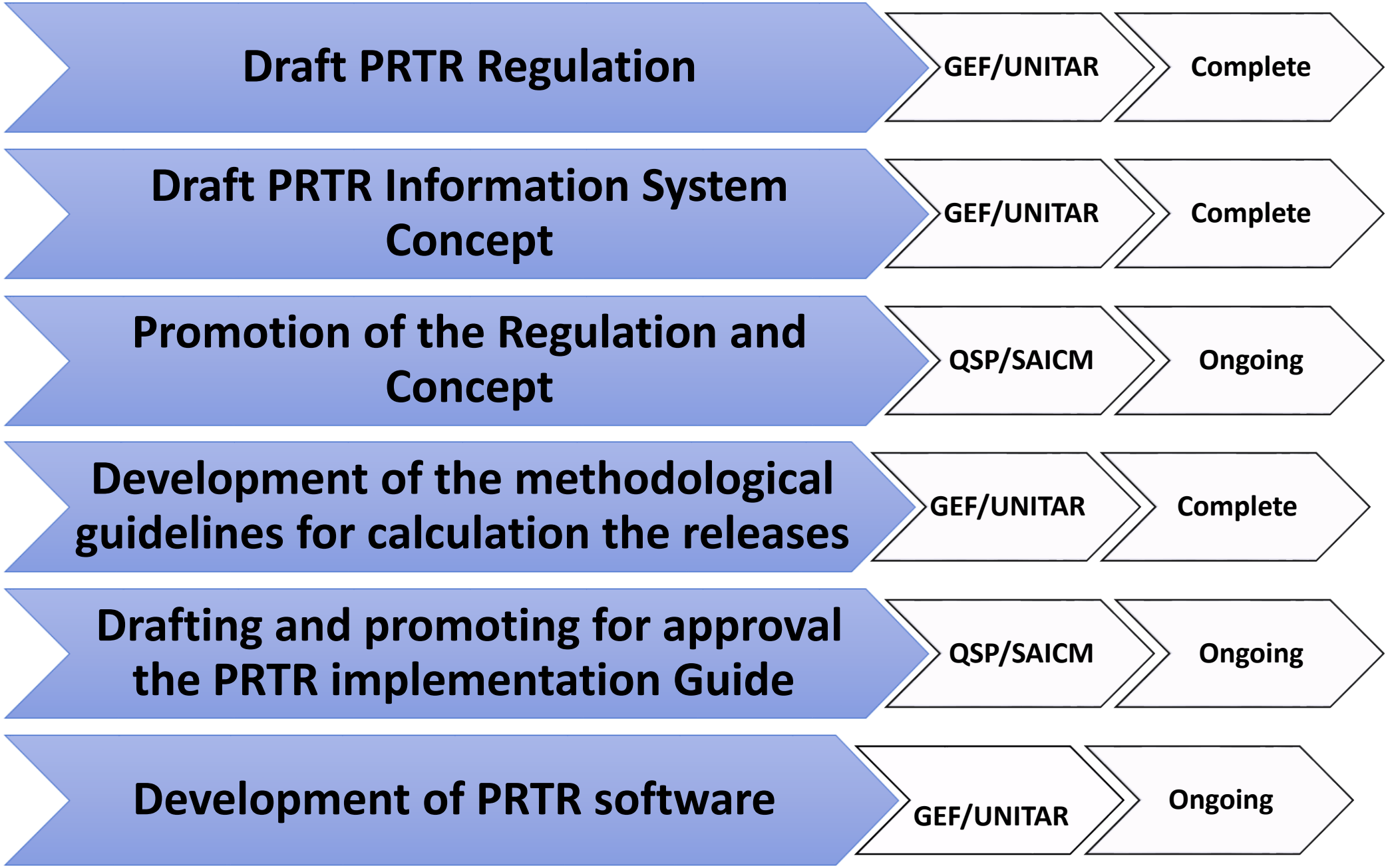
- I stage – preparation of report for 2017
- II stage – support MARDE in preparation of the report for 2018

Reporting

- Report on Pollutant Emissions and Transfer to the Secretariat of the Kiev Protocol

- Reporting to Stockholm, UNFCCC, CLATAP, Minamata Conventions

Development of the legal and regulatory framework and infrastructure



Government Decision on approval 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, the purpose, the principles, the legal normative framework, the basic functional characteristics and the conceptual architecture of the information system

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

Transposes the Regulation (EC) No. 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 Creating and Maintaining the National Registry
- Collecting, presenting and validating the data in the National Register
- Access to information, public participation and access to justice
- Monitoring of emissions

Subject of the 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

Methodological guidelines for calculation the releases to air from stationary sources:

Based on the IPCC, EMEP/EEA and UNEP (Hg) Guidelines

Detalied methodological guidelines and dedicated excel files for 8 sectors:

- **Energy**
- **Metalurgy**
- **Minerals**
- **Chemical**
- **Waste and wastewater**
- **Food process**
- **Animal rearing**
- **Other activities**

Methodology for the calculation

of pollutants releases into the atmosphere

to be applied in the Republic of Moldova

for the PRTR reporting

Chisinau, 2017

Table of Contents

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

Methodological guidelines for each sector contains 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

Glossary

CALCULUL EMISIILOR DE N2O DE LA TRATAREA APELOR UZATE PENTRU RAPORTAREA ÎN CADRUL RETP

Denumirea instalatiei:
Adresa
Anul de raportare:

Notă: Introduceţi datele doar în celulele galbene | Datele se calculează automat în celulele verzi

EMISII ÎN AER

Categoria	Stații de epurare a apelor uzate urbane
Codul Categoriei	5 (f)

		A	B	C	D	E	F	G	H	I
Nr. poluantului RETP	Poluant	Numărul 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, Fnon-con	Factorul de corecție pentru proteinele co-deversate 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	Emisii N2O
		(locuitori)	kg/capita/an	kg N/kg protein	(fracție)	(fracție)	kg N/an	kg N2O-N/kg N	(fracție)	kg
										I = ((A*B*C*D*E-F)*G)*H
5	N2O	700 000,00	26,70	0,16	1,4	1,25	0,00	0,005	1,571428571	41 118,0
			Total							

În celula galbenă introduceţi 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 instalatiei:
Adresa
Anul de raportare:

Notă: Introduceţi datele doar în celulele galbene | Datele se calculează automat în celulele verzi

EMISII ÎN AER

Categoria	Stații de epurare a apelor uzate urbane
Codul Categoriei	5 (f)

				A	B	C	D	E	F	G
Nr. poluantului RETP	Poluant	Tipul sistemelor	Sisteme de tratare și evacuare a apelor reziduale	Bo,	MCF	Numărul de locuitori deserviți de stația de tratare	CBO	Nămol îndepărtat	Emisiile de metan recuperate de la tratarea apelor	Emisii CH4
				kg CH4/kg CBO5	(fracție)	(locuitori)	(kg CBO/locuitor/an)	kg CBO/an	kg CH4/an	(kg CH4)
										G = (A*B*C*(D-E)-F)
1	CH4	Sisteme fără tratarea apelor reziduale	Evacuarea apelor reziduale în râuri și lacuri fără tratarea prealabilă a apelor reziduale	0,6	0,1	0,00	27,38	0	0	0,0
			Apa stătătoare deschise	0,6	0,5	0,00	27,38	0	0	0,0
			Canalizare cu scurgere rapidă în flux(închisă sau deschisă)	0,6	0	0,00	27,38	0	0	0,0
		Sisteme cu tratarea apelor reziduale	Sistem de epurare centralizată cu tratare aerobă a apelor reziduale administrată eficient(epurare normală)	0,6	0,1	700 000,00	27,38	0	0	1 149 750,0
			Sistem de epurare centralizată cu tratare aerobă a apelor reziduale administrată ineficient (epurare insuficientă)	0,6	0,3		27,38	0	0	0,0
			Platforme amenajate pentru nămolurile provenite de la tratarea apelor reziduale	0,6	0,3		27,38	0	0	0,0
			Lagune anaerobe puțin adânci (<2 m)	0,6	0,2		27,38	0	0	0,0
			Lagune anaerobe adânci (>2 m)	0,6	0,8		27,38	0	0	0,0
			Sisteme septice (umplute din cauza CBO sedimentează în rezervoare anaerobe)	0,6	0,5		27,38	0	0	0,0
			Total			700 000	110	0	0	1 149 750,0

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

În celula galbenă introduceţi 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 PRTF

Facility Name:
Address
Reporting year:

Note: DataEntry in the yellow cells only | Data Output in the green cells only

RELEASES 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-2016,1A section 1A1a	8	NOx	89	gGJ	4450	kg
	2	CO	39	gGJ	1950	kg
	7	NMVOC	2,6	gGJ	130	kg
	11	SOx	0,281	gGJ	14,05	kg
	102	TSP	0,89	gGJ	44,5	kg
	86	PM 10	0,89	gGJ	44,5	kg
	100	PM 2,5	0,89	gGJ	44,5	kg

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)

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

În celula galbenă introduceţi datele de activitate

În celula verde rezultatul se va calcula automat

unauthorized landfills

emissions from transport means

Diffuse sources:

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

agricultural activities (use of pesticides and fertilizers)

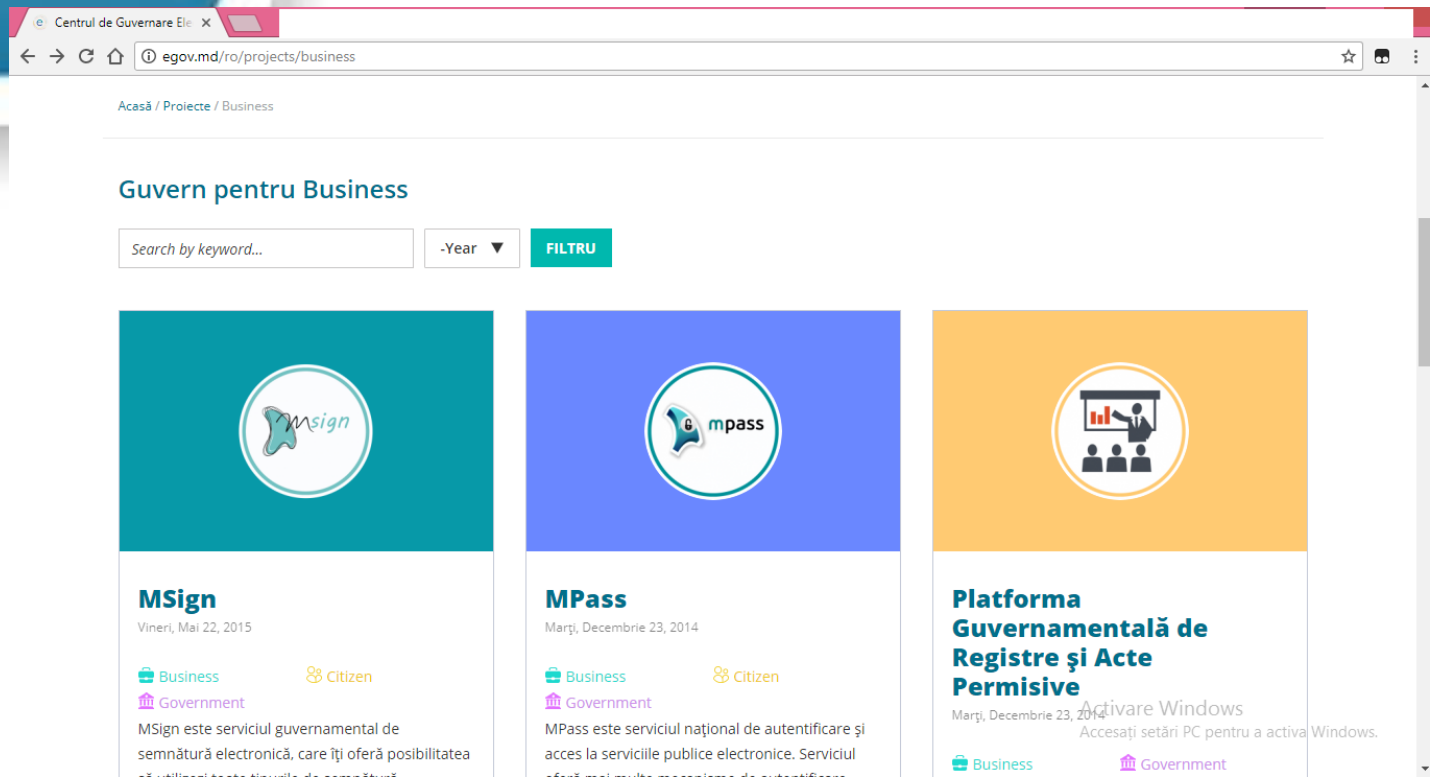
livestock farms with non-organized wastewater discharges on their surface

Within one month of the entry into force of the Regulation, the **Guide to facilitating the Implementation of the National Emissions and Pollutant Transfer Registry** shall be approved.

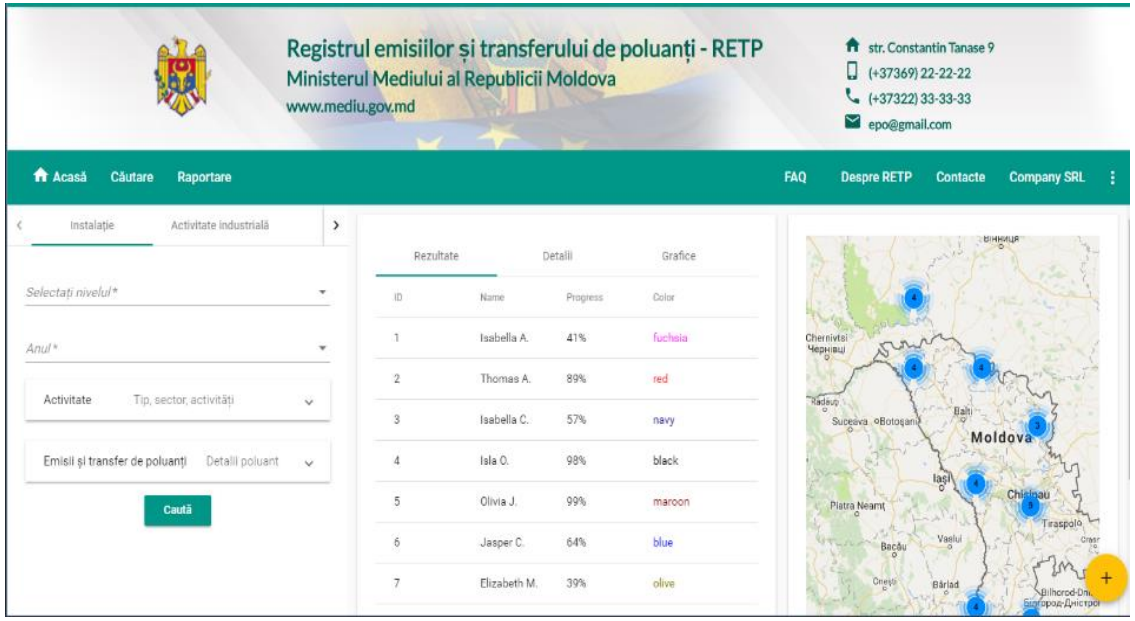
The Guide will include:

- 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.

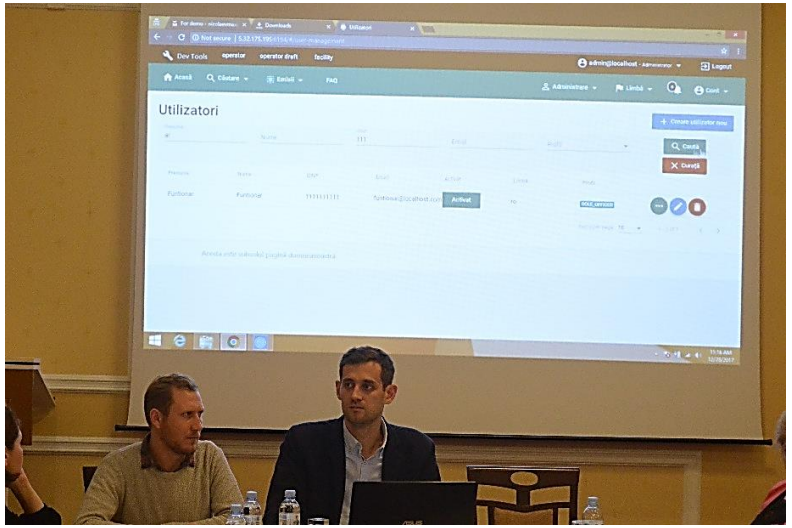
AIS PRTR will be hosted by the governmental technological platform Mcloud

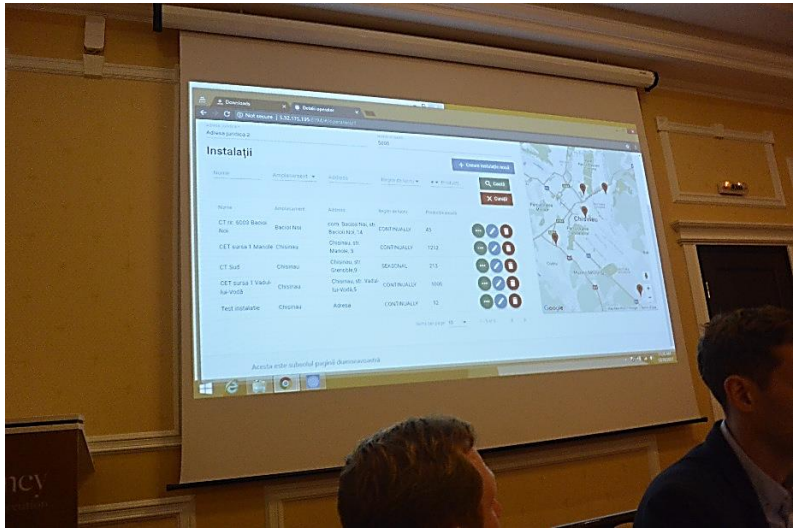


Will be interconected with other governmental services MPass, MSign, MLog)

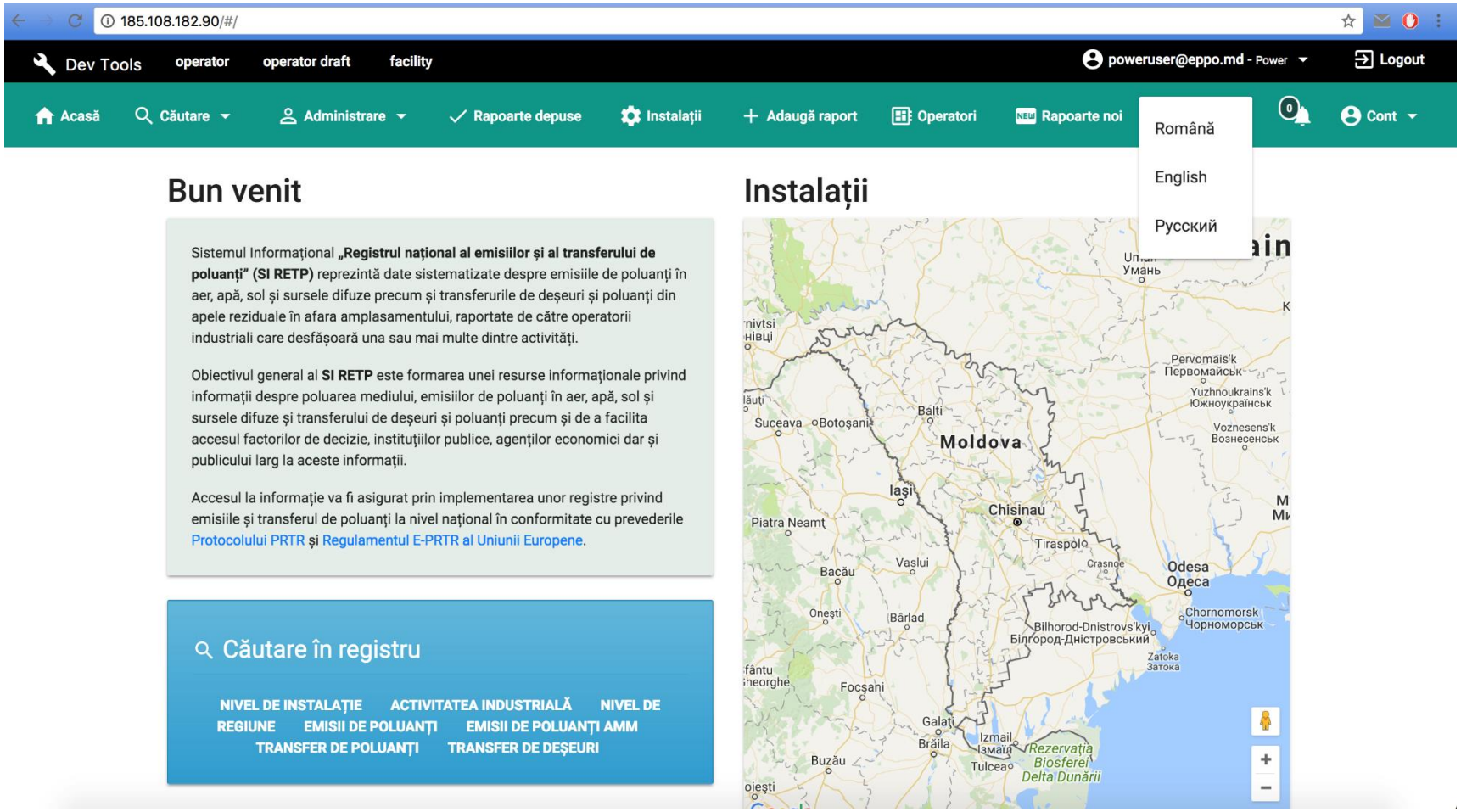


The first prototype was presented during the National initial workshop of the project Strengthening capacities for the development of the national Pollutant Release and Transfer Registers (PRTR) and supporting SAICM implementation in two countries with economy in transition: the Republic of Moldova and the Republic of Macedonia (28 December, 2017)

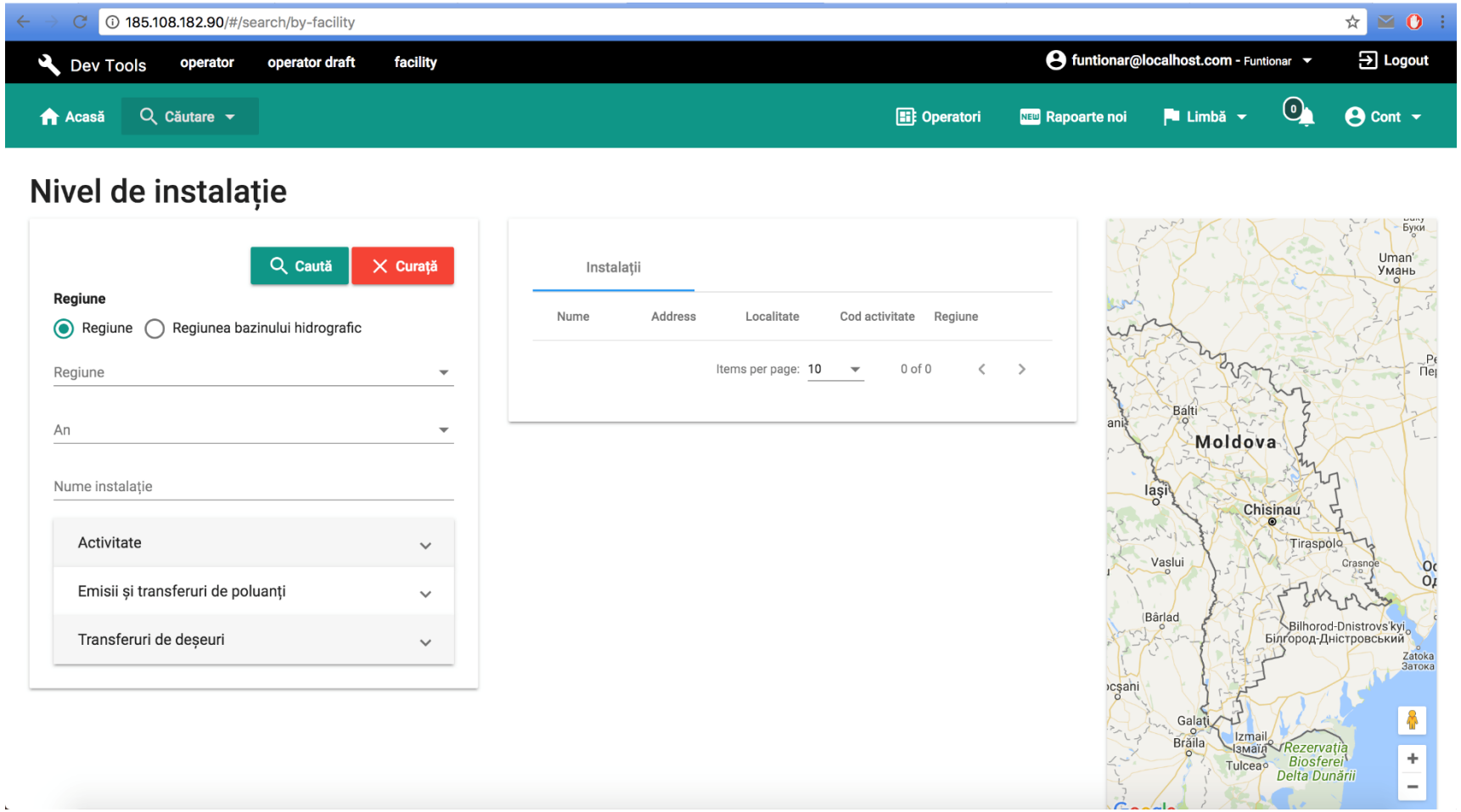




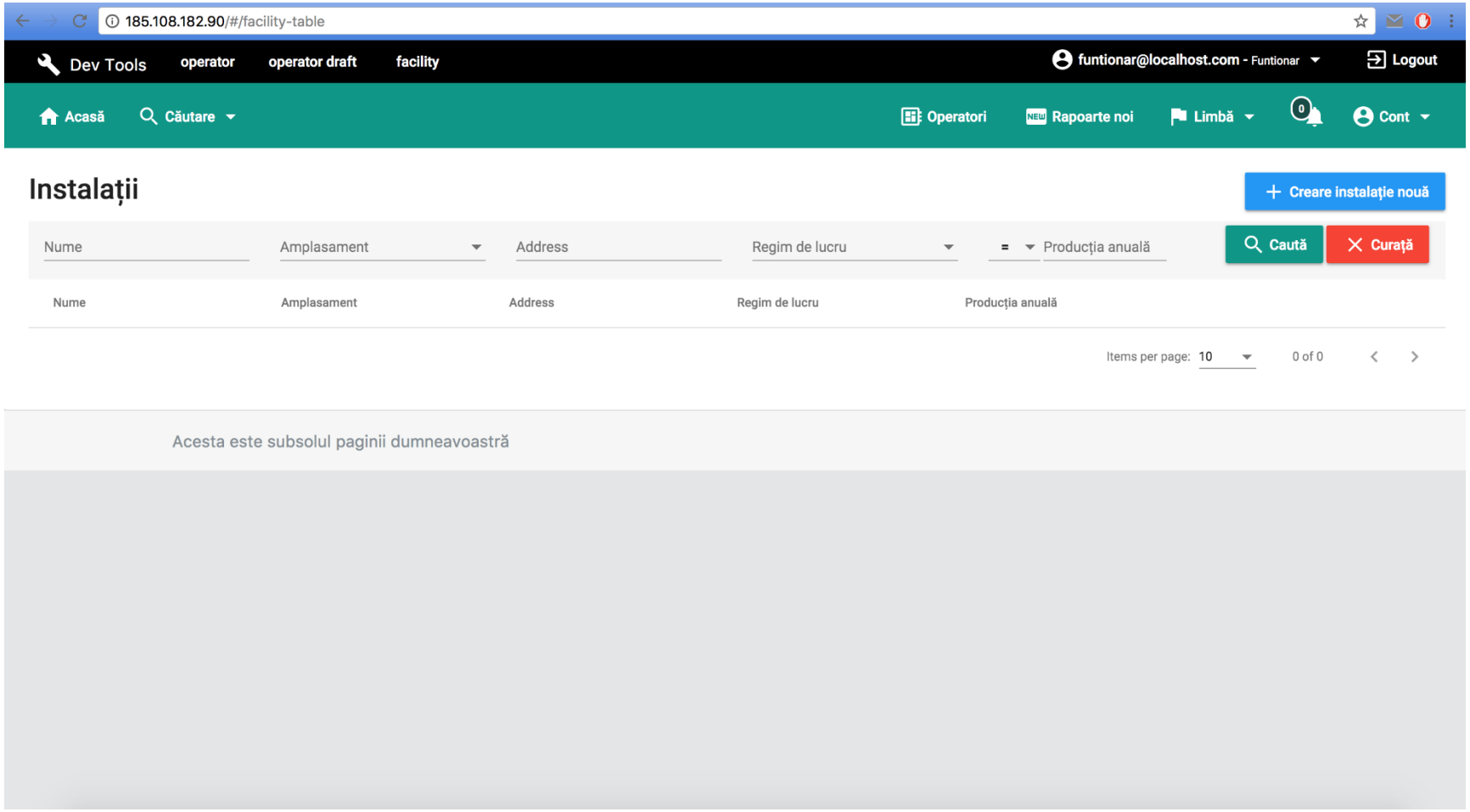
Main Page of the App



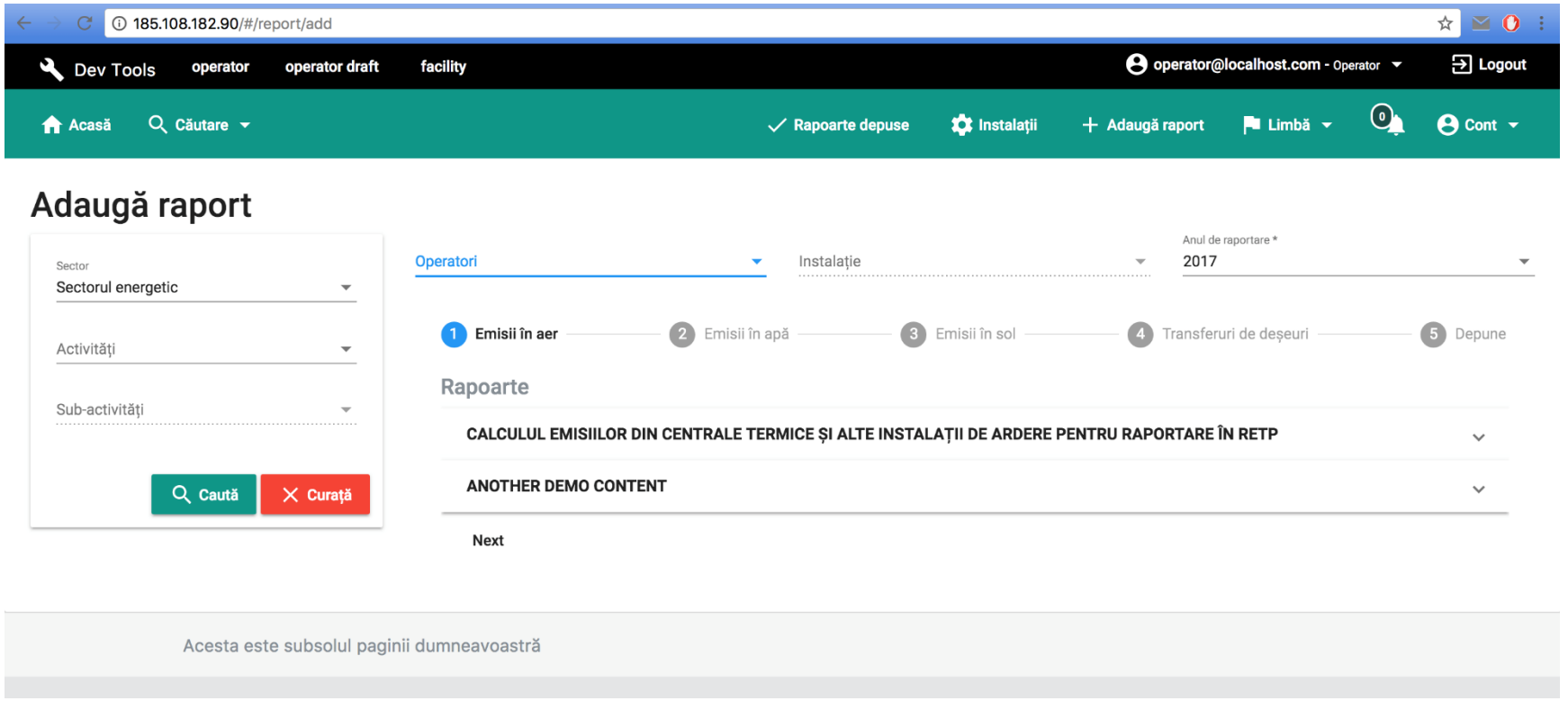
Facilities Page, Search, Interactive Map



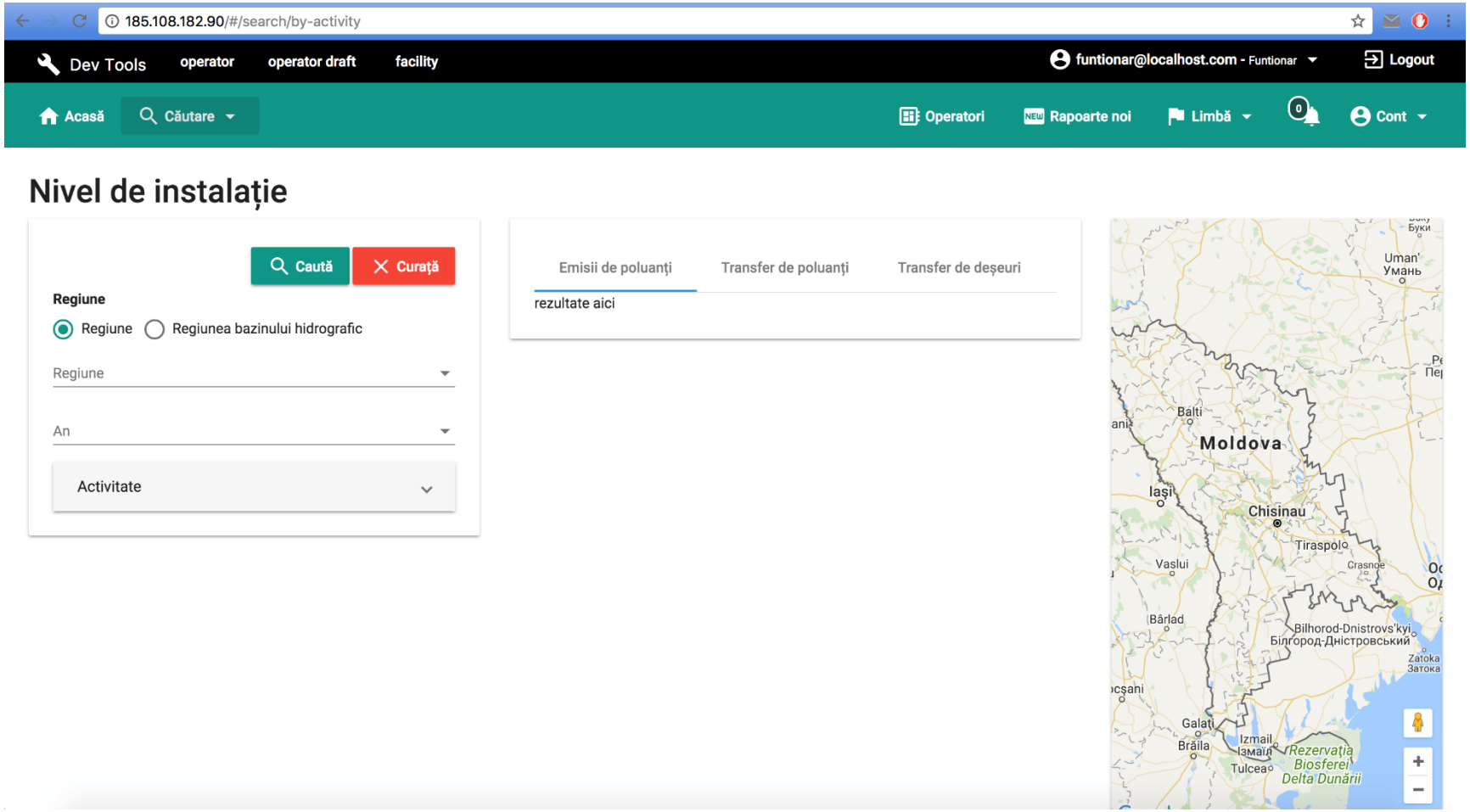
Facility Table



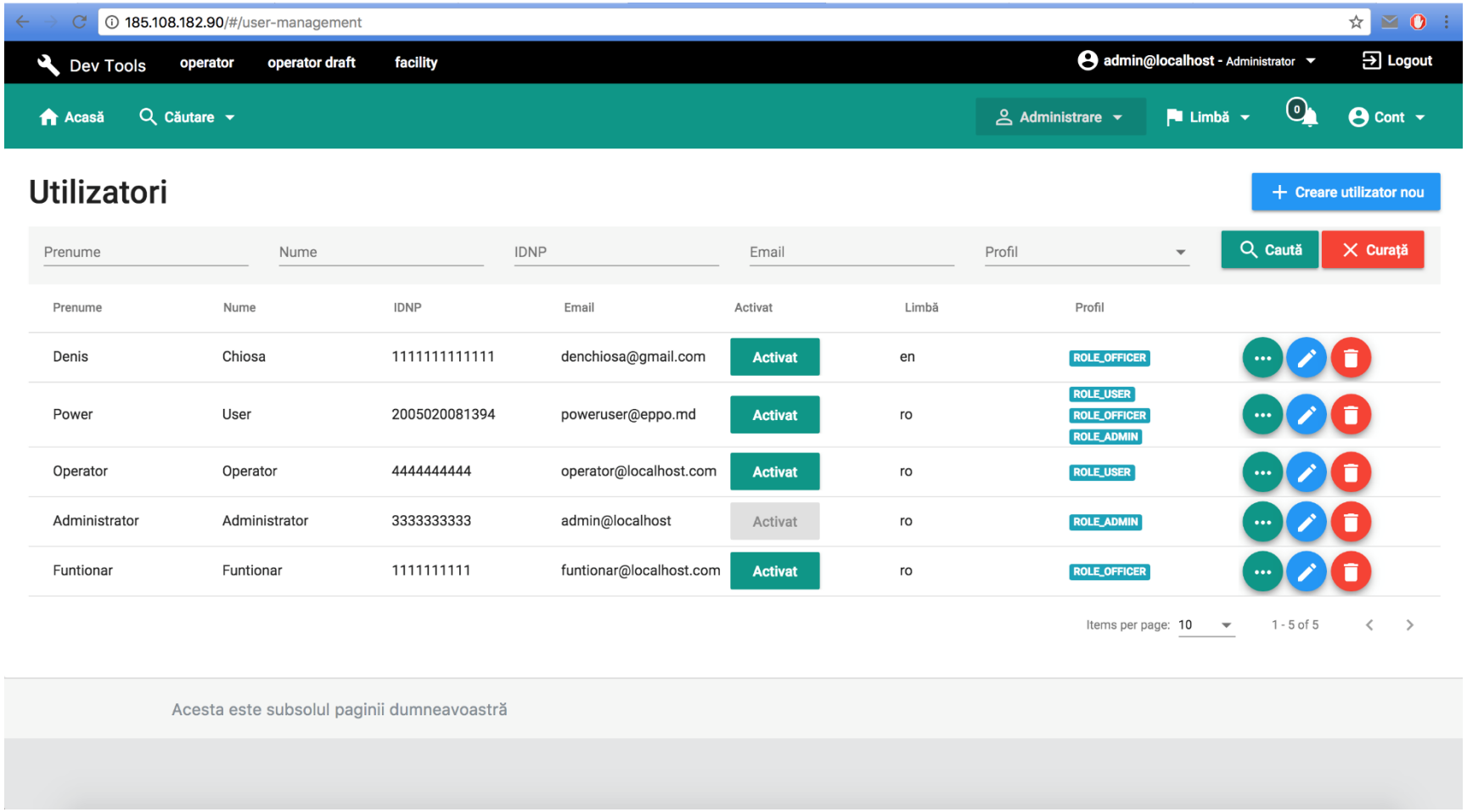
Adding a Report



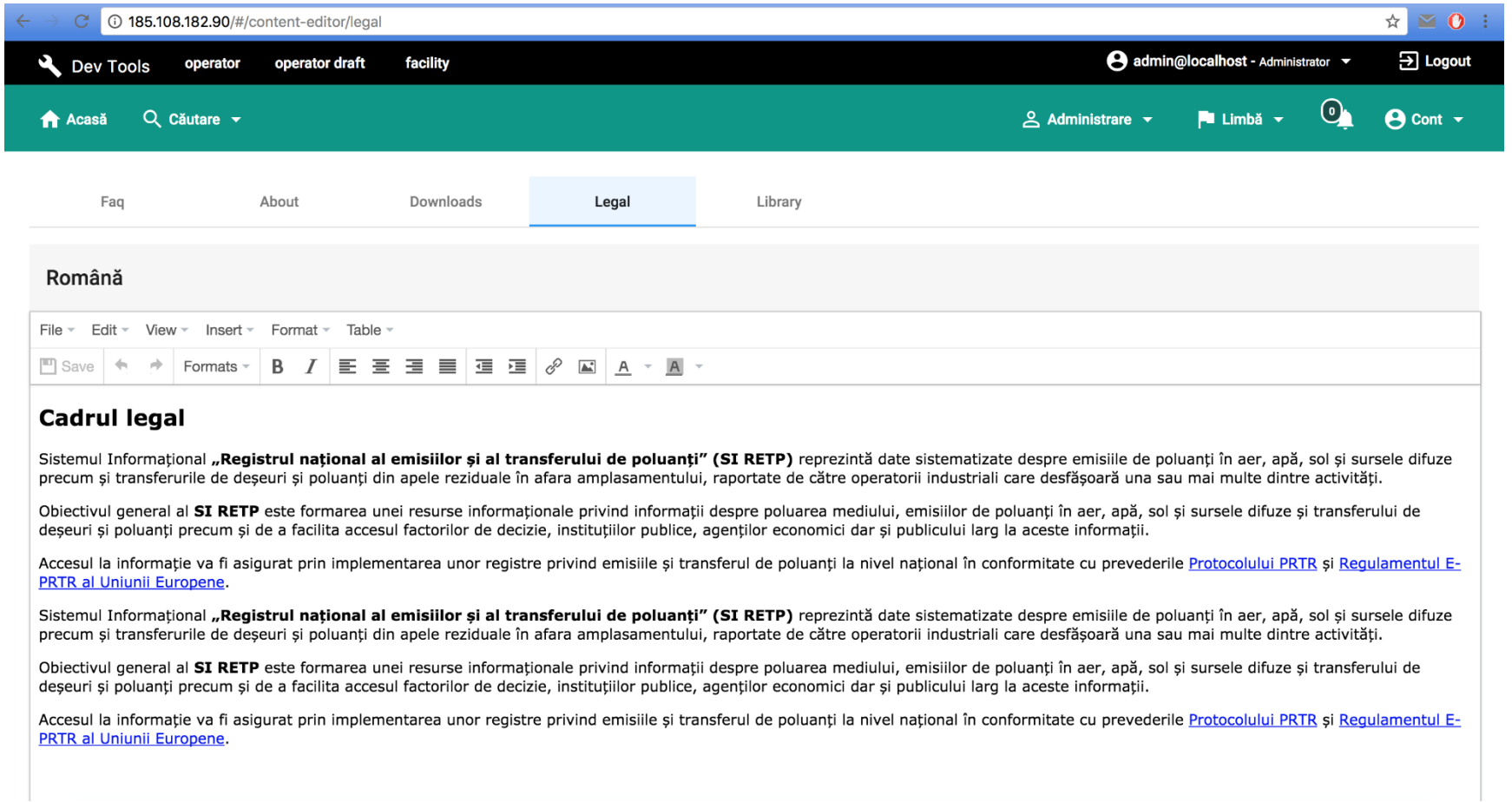
Advanced Search by Activity



User Management based on Roles



CMS


185.108.182.90/#/content-editor/legal
Dev Tools
operator
operator draft
facility
admin@localhost - Administrator
Logout
Acasă
Căutare
Administrare
Limbă
0
Cont
Faq
About
Downloads
Legal
Library
Română
File
Edit
View
Insert
Format
Table
Save
Formats
Cadrul legal
Sistemul Informațional **„Registrul național al emisiilor și al transferului de poluanți" (SI RETP)** reprezintă date sistematizate despre emisiile de poluanți în aer, apă, sol și sursele difuze precum și transferurile de deșeuri și poluanți din apele reziduale în afara amplasamentului, raportate de către operatorii industriali care desfășoară una sau mai multe dintre activități.
Obiectivul general al **SI RETP** este formarea unei resurse informaționale privind informații despre poluarea mediului, emisiilor de poluanți în aer, apă, sol și sursele difuze și transferului de deșeuri și poluanți precum și de a facilita accesul factorilor de decizie, instituțiilor publice, agenților economici dar și publicului larg la aceste informații.
Accesul la informație va fi asigurat prin implementarea unor registre privind emisiile și transferul de poluanți la nivel național în conformitate cu prevederile Protocolului PRTR și Regulamentul E-PRTR al Uniunii Europene.
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NATIONAL STRATEGY FOR PUBLIC ACCESS TO ENVIRONMENTAL INFORMATION AND PRTR

National Strategy for Public Access to Environmental Information and PRTR

sets

- target audiences
- tools
- timeline
- legal and institutional arrangements
- financial arrangements

needed for securing the better access of public to environmental data and identifies major steps that the Republic of Moldova must take implement the PRTR.

The major objectives of the Strategy:

To improve the accuracy and volume of environmental information in the field connected to pollution

To propose actions to improve the country's obligations related to PRTR reporting by applying the best international experience with the support of UNITAR

To identify major gaps and inconsistencies on environmental data reporting and presentation

The establishment of the PRTR shall allow Moldova to answer to the following questions:

Who is generating potentially harmful releases or transfers to various environmental media?

What pollutants are being released or transferred?

How much is being released or transferred over a specific time period?

To what media are these pollutants being released or transferred and, how much of each is going to air, water or soil?

What is the geographic distribution of pollutant releases or transfers?


National coordination mechanism
General public
Experts groups
Strategy target groups
Mass media
Industries
Public associations

Strategy structure and approach

Section 1: Problem analysis

Section 2: Scoping of the document

Section 3: Rationale

Section 4: Structure and approach

Section 5: Capacity building to implement the PRTR

Section 6: Target audiences

Section 7: Activities

Section 8: Software and media

Section 9: Educational materials

Section 10: sustainability

Section 11: Dissemination outputs and impact

Section 12: Action plan

Grouping of activities under the strategy

Group 1 of activities shall be targeted towards **Improving data quality**

- training of industries on **techniques used to estimate releases from various sources**.
- Option 1: Based on 9 PRTR sectors
- *Option 2: Based on types of sources (*Point sources, Diffuse sources, Off-site transfers)

Group 2 of activities shall be targeted on **PRTR data applications**

- Presentation and dissemination of PRTR data - sharing best practices (EU members and non- EU).
- Uses of PRTR data and Tools for their Presentations – includes presentation of various examples of the use of PRTR data as well as tools for presenting and illustrating them by population, IGs and other groups in various countries.
- Networking and partnership - the role and examples of regional networking

Type of activities

Documentary visits for the enterprises on assessment of the current status

National coordination team /Steering Committee meetings:

Thematic trainings and workshops for industry

2 day ToT for NGOs

Briefing for Mass media combined with visit to the enterprise for checking the emission control equipment

Indicators

DISSEMINATION TOOL	INDICATOR	TARGET VALUE	INFORMATION PROVIDED	IMPACT	FEEDBACK POSSIBILITY
Dissemination events/ Trainings	Nr of participants/ evaluation forms	2	- Clear information about the PRTR: -	Clear understanding of the PRTR importance, access to information, Information exchange with stakeholders, interested parties	Direct
PRTR Website	Average No of hits per month on project website	25	- Clear information about the PRTR - contact details	Clear understanding of the PRTR importance, access to information, Information exchange with stakeholders, interested parties - regular update of interested parties (continuous information flow)	Indirect/Direct
PRTR brochure	Nr of copies	100	- Clear information about the PRTR - contact details	Clear understanding of the PRTR importance, access to information, Information exchange with stakeholders,	Indirect/Direct
PRTR techniques and methodologies guidebook	Nr of copies	TBC	-guidebook/s use of estimation techniques by each sector relevant to the country	Relevant knowledge and practical skills on reporting	Direct

ACTION PLAN

Name of event	Sem 2/2016	Sem 1/2017	Sem 2/2017	Sem 1/2018	Sem 2/2018	Sem 1/2019
Steering Committee meetings:	X		X		X	X
Documentary visits for the enterprises on assessment of the current status	X					
10 days - Training of Ministry of Environment and ecological inspection staff	X	X	X		X	X
1-2 days cycles of by-sector trainings per 9 PRTR sectors for industry			X	X		
2 day ToT for NGOs				X		
1 day briefing for Mass media combined with visit to the enterprise for checking the emission control equipment					X	

Training activities concept

1st cycle

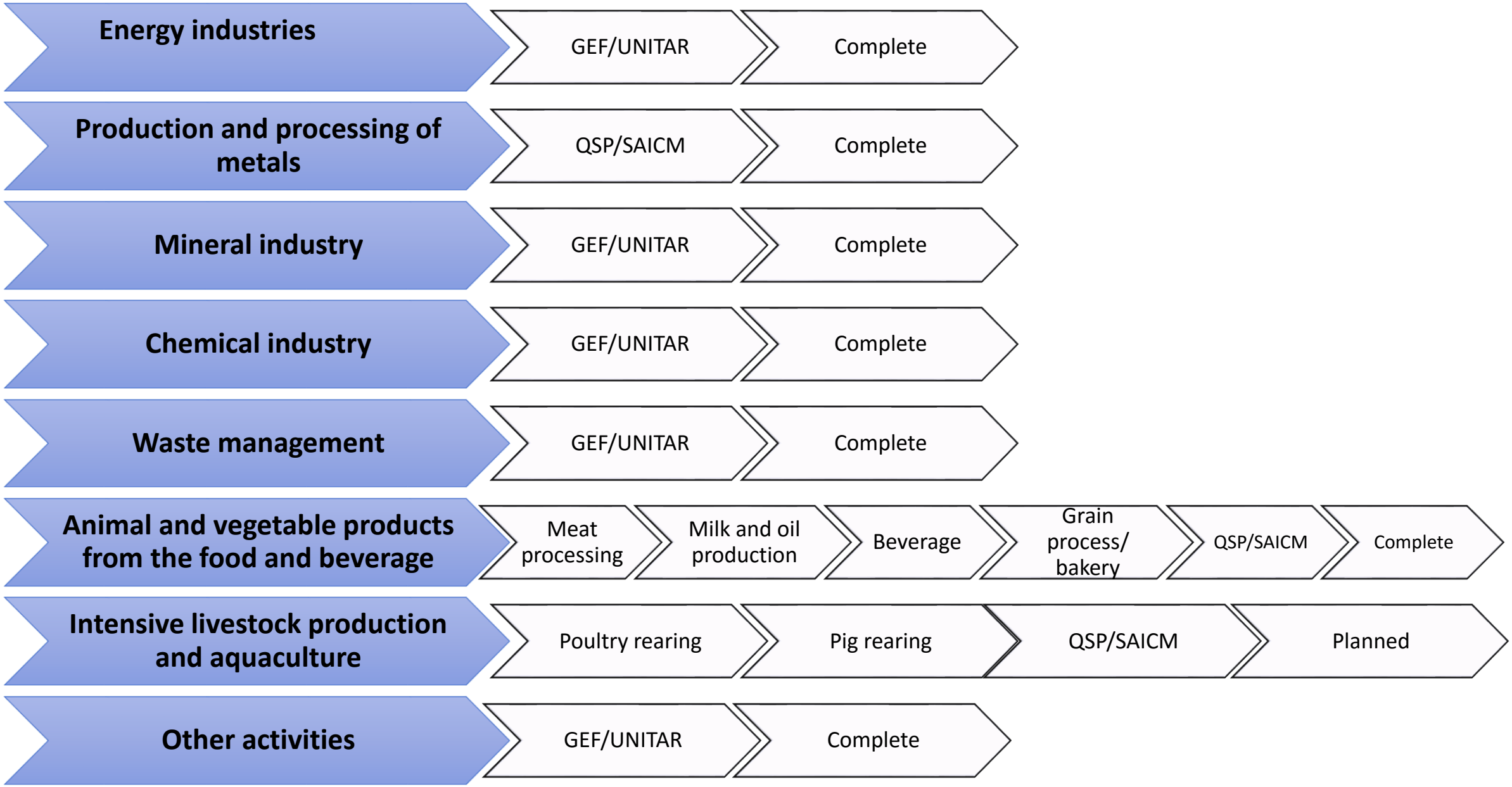
- methodology and excel files among economic operators and inspectors presented and tested

out of 600 selected economic operators cca 350 attended the workshops

2nd cycle

- Testing and piloting the PRTR software among economic operators, inspectors, authorities and civil society

Training of stakeholders – 1st cycle

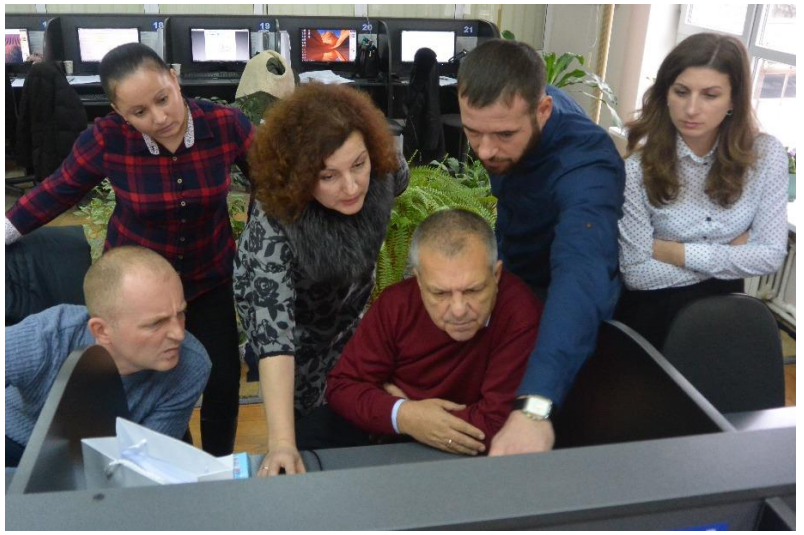


1 December 2017

- Workshop for launching the series of trainings with the representatives of the Environmetnal Inspectorate

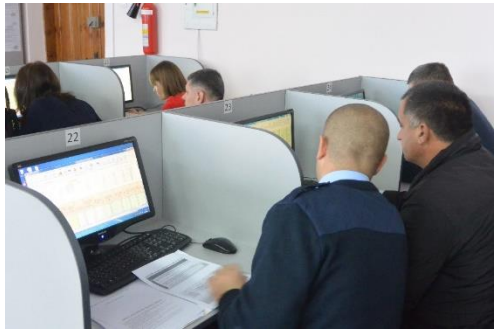
29 November 2017

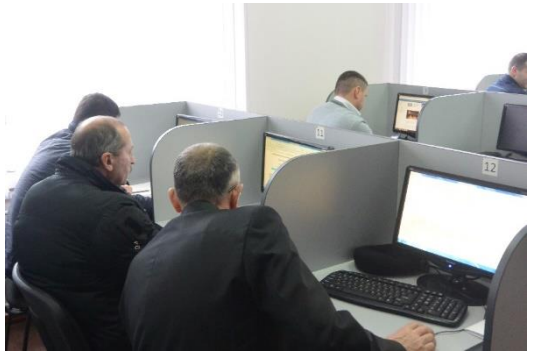
- Training workshop with representatives of sector 1 – energy sector

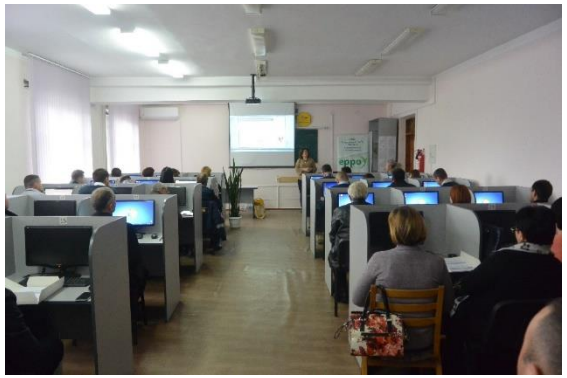


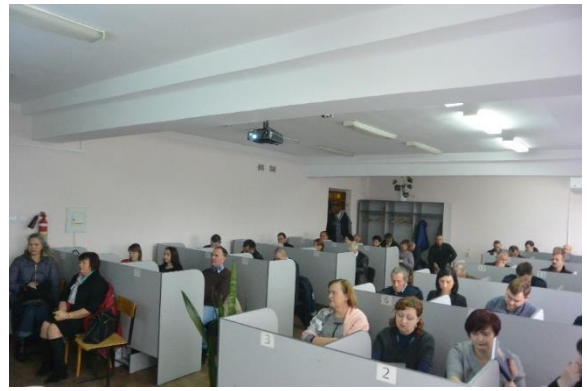
5,6,8 December 2017

- Training workshop with representatives of sanitation and water supply services for North, South an Central part – sector 5



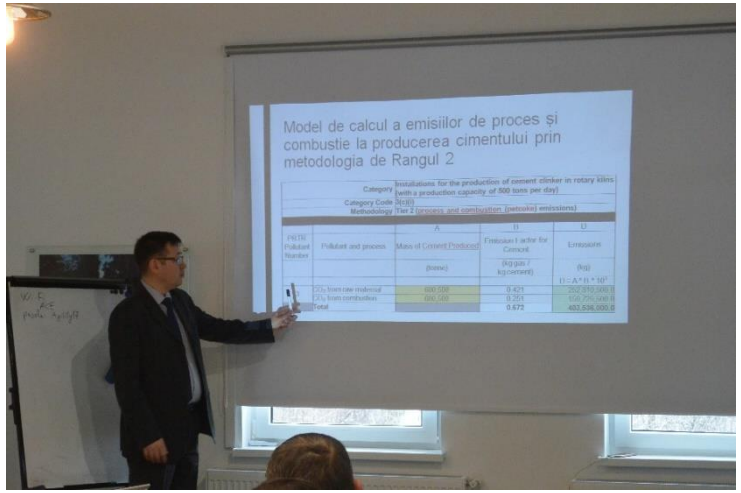






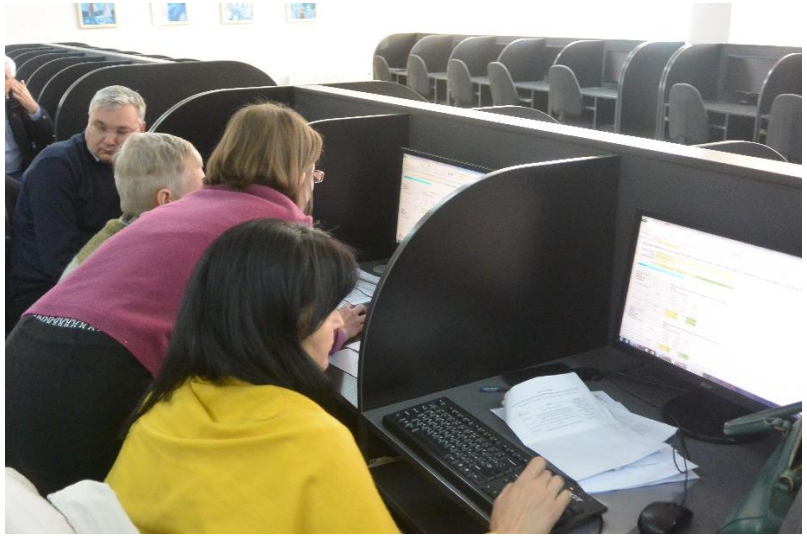
19 December 2017

- Training workshop with representatives of mineral extraction and process industry – sector 3



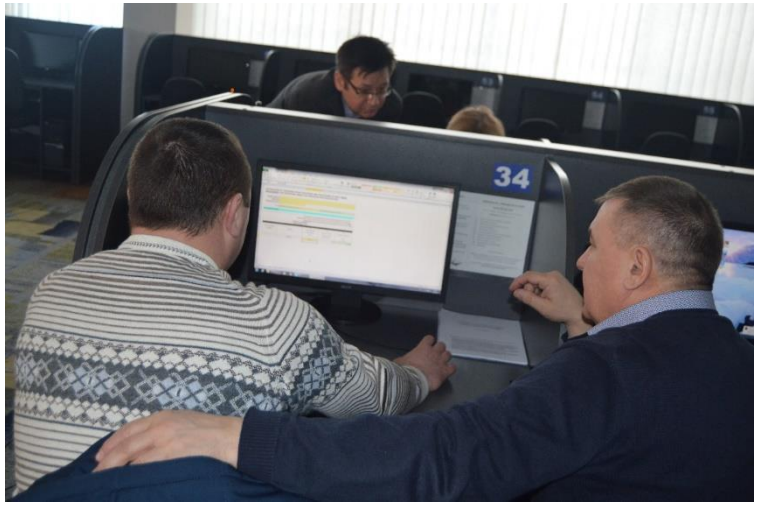
22 December 2017

- Training workshop with representatives of sector 4 and 9



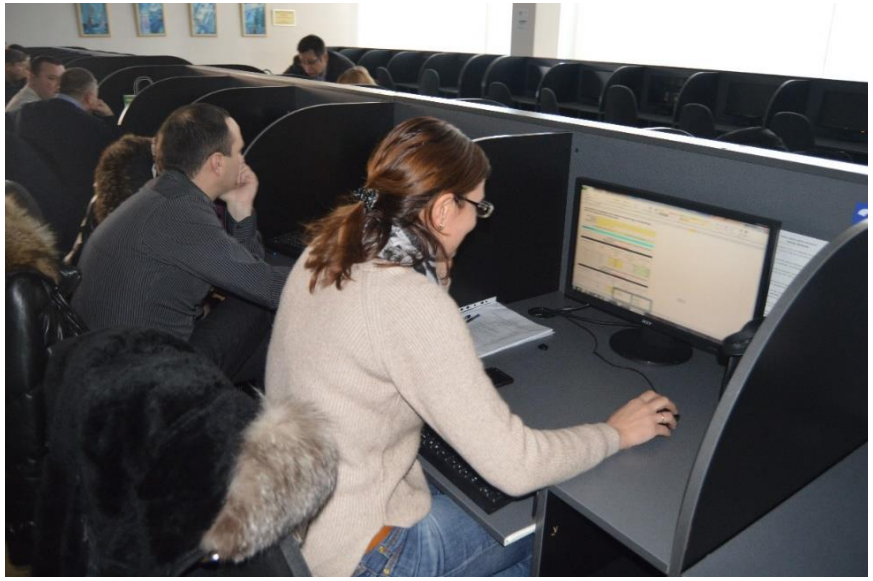
23 and 25 January 2018

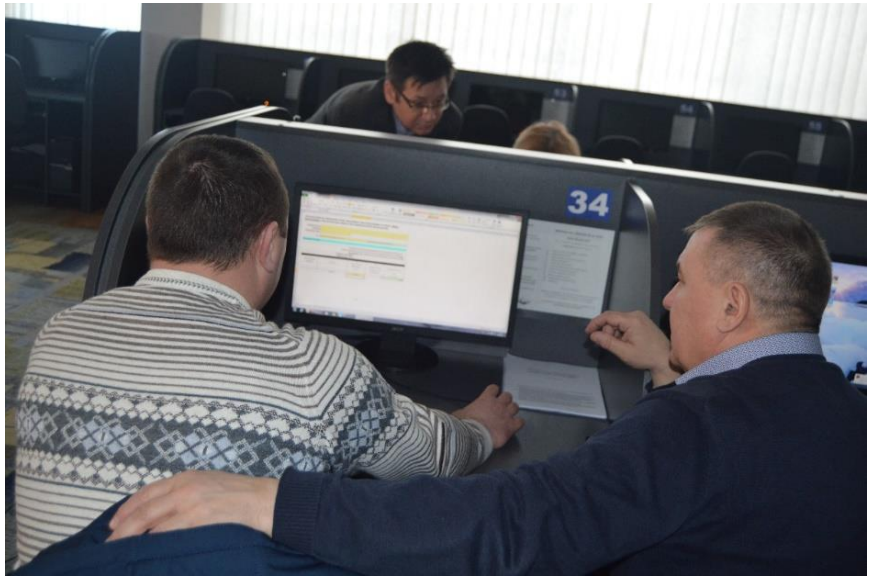
- Training workshop with sector 8 (4 half day workshops)
  - Meet process Milk process Beverage
  - Grain process and bakeries



31 January 2018

- Training workshop with representatives of metallurgic industry – sector 2





POPs related issues

Old POPs

Pesticides

- **Aldrin**
  - Prohibitted since soviet times
- **Chlordane**
- **DDT**
  - Prohibitted since soviet times
- **Dieldrin**
  - Prohibitted since soviet times
- **Endrin**
- **Heptachlor**
  - Prohibitted since soviet times
- **Hexachlorobenzene**
- **Mirex**
- **Toxaphene**
  - Prohibitted since soviet times

Industrial chemicals

- Hexachlorobenzene
- Polychlorinated biphenyls (PCBs)

By-products

- Hexachlorobenzene
- Polychlorinated dibenzo-p-dioxins
- Polychlorinated dibenzofurans (PCDD/PCDF)
- PCBs

New POPs

Pesticides

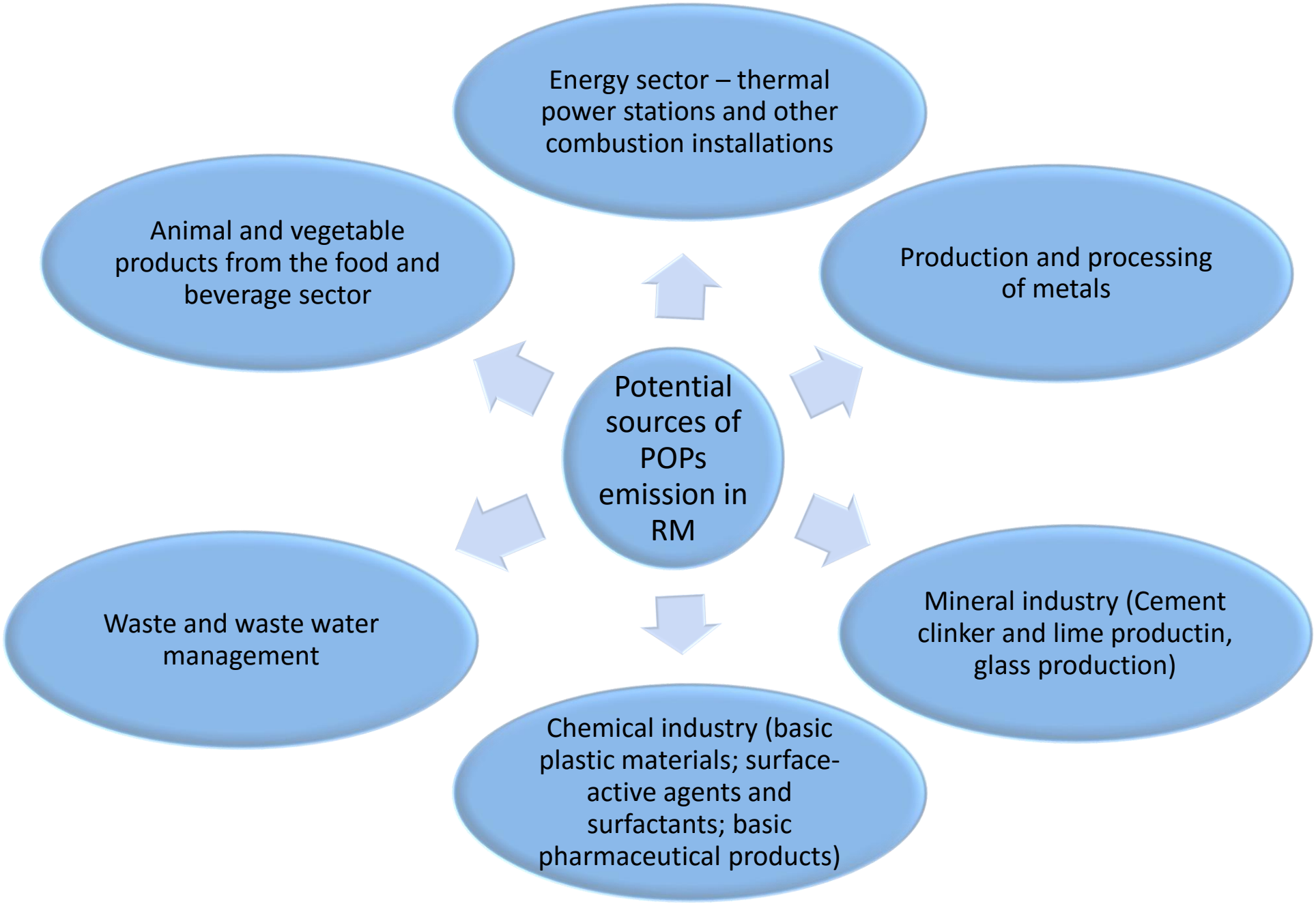
- **Chlordecone**
  - Amendment to Annex A accepted by RM in 2013
- **Lindane**
  - Amendment to Annex A accepted by RM in 2013
- **Alpha hexachlorocyclohexane**
  - Amendment to Annex A accepted by RM in 2013
- **Beta hexachlorocyclohexane**
  - Amendment to Annex A accepted by RM in 2013
- **Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride**
- **Pentachlorobenzene**

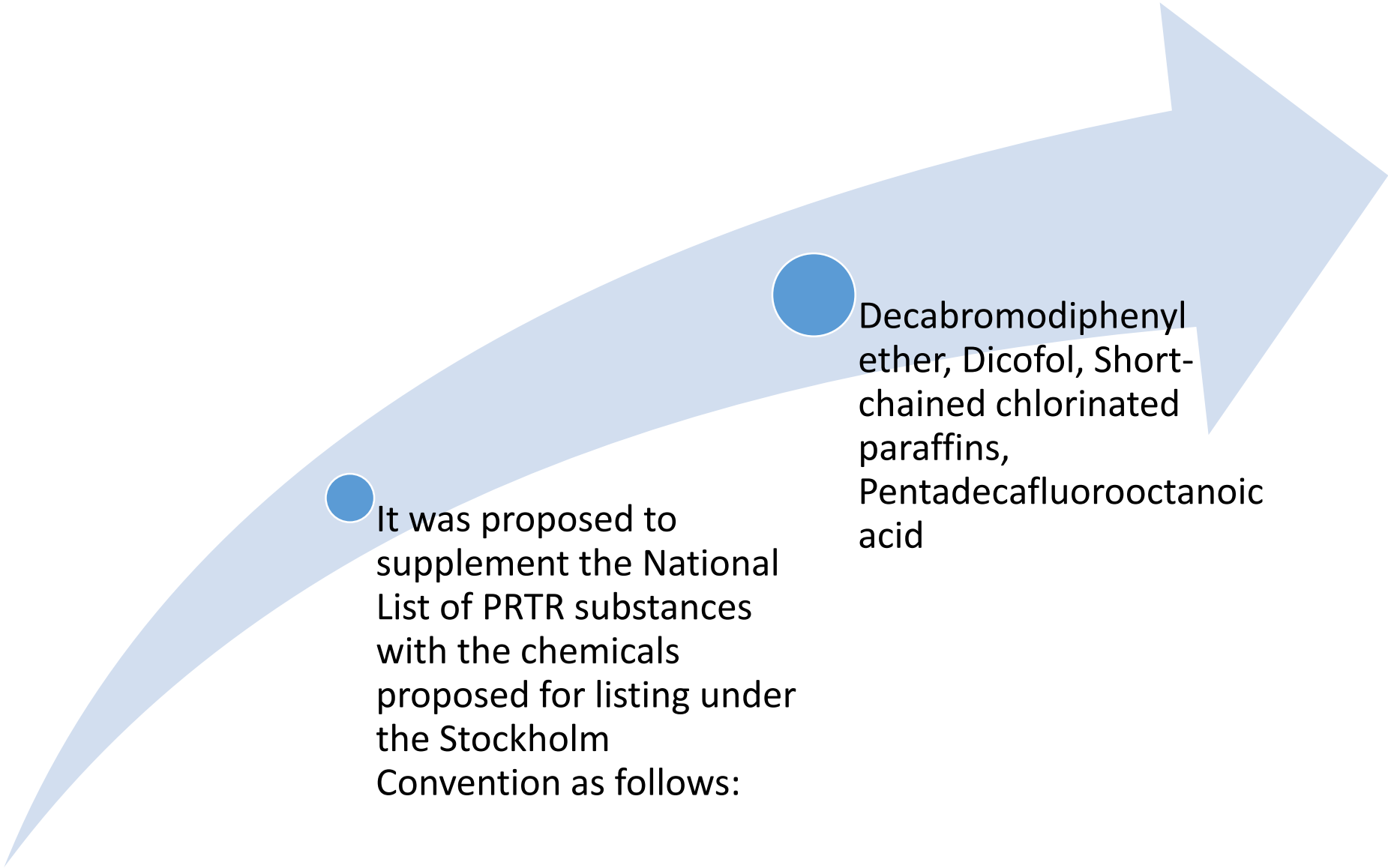
Industrial chemicals

- Commercial pentabromodiphenyl ether
- Commercial octabromodiphenyl ether
- Hexabromobiphenyl
- Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride

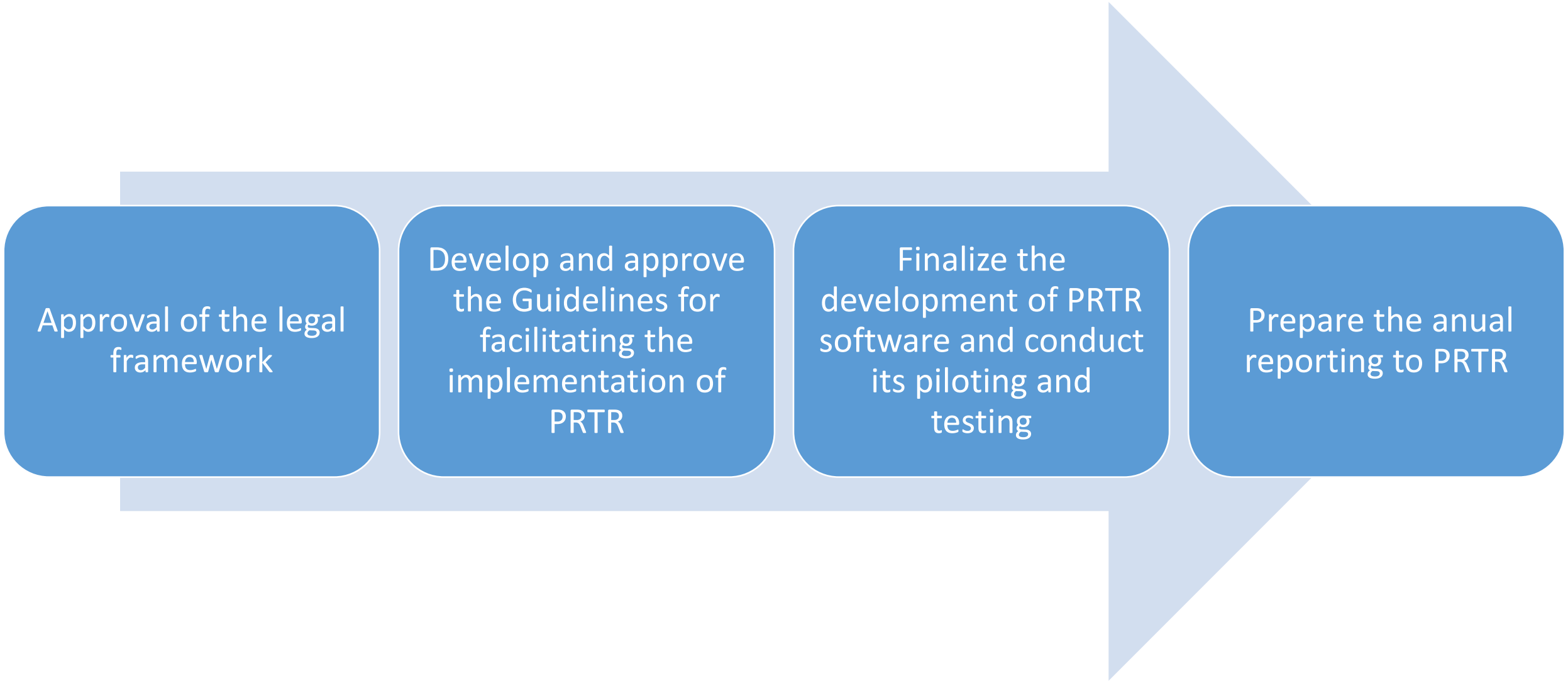
By-products

- Alpha hexachlorocyclohexane (by product of lindane)
- Beta hexachlorocyclohexane (by product of lindane)
- Pentachlorobenzene


Potential sources of POPs emission in RM
Energy sector – thermal power stations and other combustion installations
Production and processing of metals
Mineral industry (Cement clinker and lime productin, glass production)
Chemical industry (basic plastic materials; surface-active agents and surfactants; basic pharmaceutical products)
Waste and waste water management
Animal and vegetable products from the food and beverage sector


It was proposed to supplement the National List of PRTR substances with the chemicals proposed for listing under the Stockholm Convention as follows:
Decabromodiphenyl ether, Dicofol, Short-chained chlorinated paraffins, Pentadecafluorooctanoic acid

Next steps


Approval of the legal framework
Develop and approve the Guidelines for facilitating the implementation of PRTR
Finalize the development of PRTR software and conduct its piloting and testing
Prepare the anual reporting to PRTR

Issues for discussion

Approaches in calculation the emissions to soil

Diffuse sources

Allocation of releases to sectors in accordance with EMEP and IPCC approach