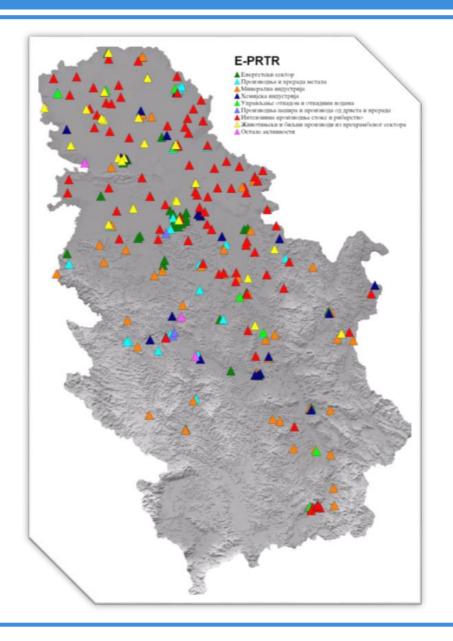
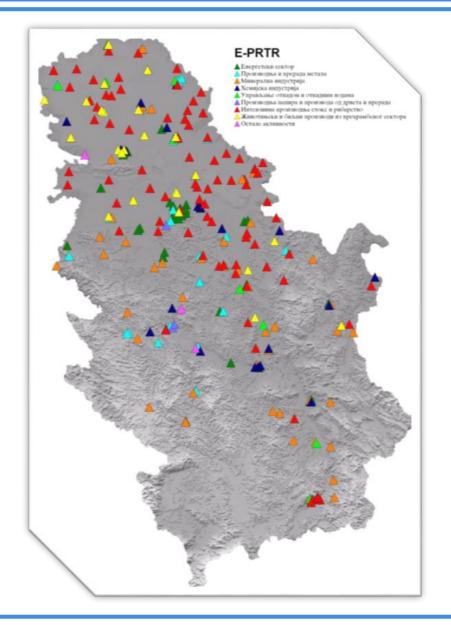


Serbia PRTR Implementation Overview – Data collection and Data validation

Nebojsa Redzic Environmental Protection Agency Republic of Serbia



- SEPA started with implementation of PRTR protocol and E-PRTR directive in 2008.
- Serbia adopted PRTR protocol and E-PRTR directive 166/2006 through the Bylaw of National Register of Pollution Sources (Off gazette, no. 91/2010).
- PRTR protocol ratified in 2011.
- IS developed in 2012.
- GIS developed in 2016.



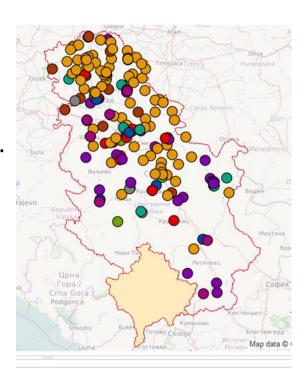
SEPA collect data from various fields of industrial and communal pollution:

- Emission to air
- Emission to water
- Waste generation and management
- Inland movement of waste
- Transboundary movement of waste
- Products that become special waste streams after use
- VOC
- F gasses
- CLRTAP and GHG inventories
- etc.

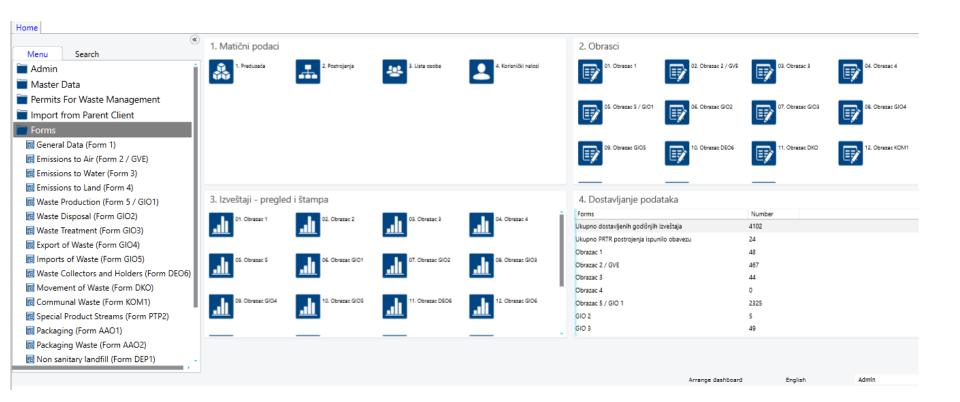


For all these activities it is necessary to establish strong IT support:

- Modular IT system.
- GIS component.
- Facilities have obligation to report using IT system of National register of Pollution Sources established in SEPA.
- No paper or Excel reporting for PRTR.
- IT system is continually expanded with the goal that all segments of National Register of Pollution Sources merged into a single system in accordance with national and international legislation,
- IT system needs to help operators to deliver their reports on the easiest way and as quickly as possible, but also help administrators to more easily verify data and prepare the necessary reports.

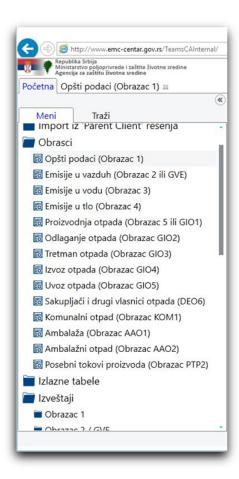


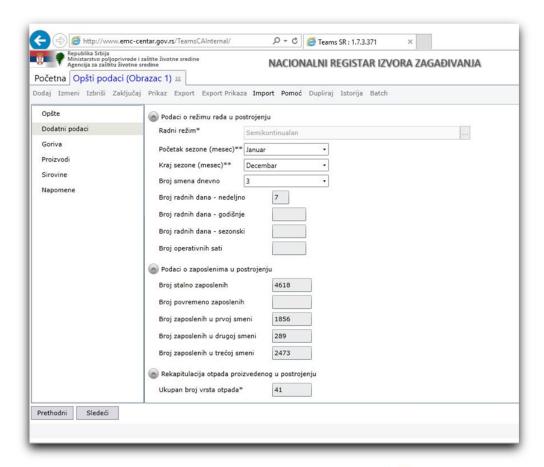
Data management



Data management

Forms



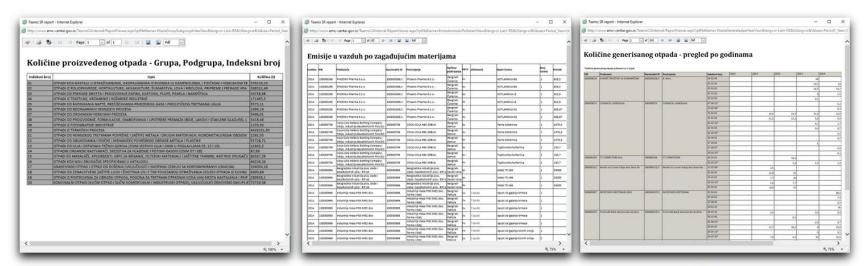




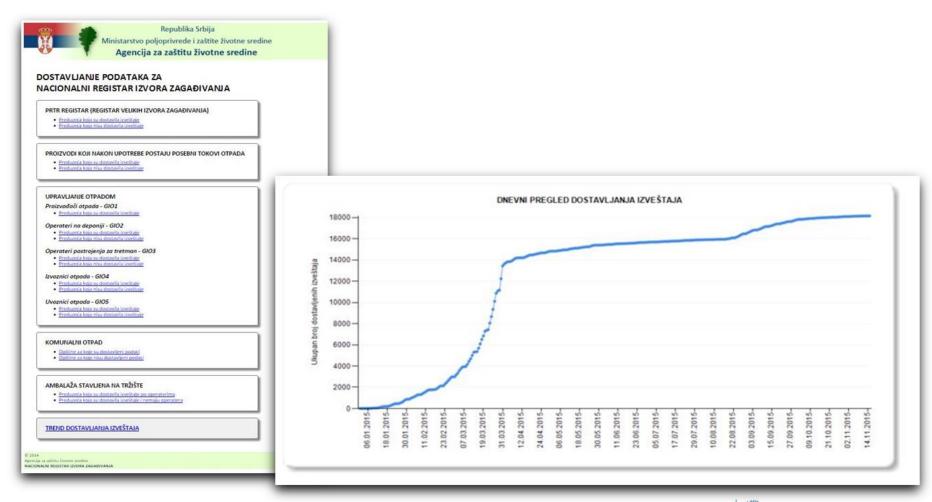
Data management

Analytical Reports

- Analytical reports Dozens of different reports for internal use and reports preparation.
- Data verification reports
- Data compared through the years.
- Comparison between facilities
- Emission to air, emission to water, waste management reports



Portal for data submission trend monitoring



Portal for data submission trend monitoring

PRTR REGISTAR (REGISTAR VELIKIH IZVORA ZAGAĐIVANJA)

Preduzeća koja su dostavila kompletne izveštaje

U izveštaju je prikazana lista PRTR preduzeća koja su u potpunosti ispunila obavezu izveštavanja.

"Da" znači da je obaveza izveštavanja ispunjena za dati obrazac.

"Ne" znači da obaveza izveštavanja nije ispunjena za dati obrazac.

"-" znači da ne postoji obaveza izveštavanja za dati obrazac.

Oznaka npr. "10/8" (u kolonama Obrazac 2, Obrazac 3 i Obrazac 4) predstavlja broj ispusta ili izvora zagađivanja za koje je trebalo dostaviti izveštaje (10) / broj ispusta ili izvora zagađivanja za koje je ispunjena obaveza izveštavanja (8).

Izveštajna godina: 2017 🗸

14 4 1 of	6 b b l 4	Find Next 👢 🕶 🚱	Find Next												
Opština sedišta preduzeća	PIB	Preduzeće	Adresa preduzeća	Opština postrojenja	Nacionalni ID	Postrojenje	Obrazac 1	Obraz	ac 2	Obraz	ac 3	Obraz	ac 4		Registrovano u godini izveštavanja
Ada	106684675	FARMAHALAS d.o.o. ADA	Vinogradska 9	Ada	106684675/1	FARMAHALAS d.o.o. Farma svinja	Da	1/1	Da	-	-	-	-	Da	
Alibunar	101086675	PP PEŠČARA DOO BANATSKI KARLOVAC	NEMANJINA 76	Alibunar	101086675/1	Farma tovljenika "PEŠČARA"	Da	1/1	Da	-	-	-	-	Da	
Apatin	100962933	Apatinska pivara D.O.O	Trg Oslobođenja 5 5	Apatin	100962933	Apatinska pivara d.o.o	Da	10/10	Da	1/1	Da	-	-	Da	
Bačka Palanka	100495907	CARLSBERG SRBIJA	Proleterska 17	Bačka Palanka	100495907	CARLSBERG SRBIJA	Da	7/7	Da	1/1	Da	-	- 1	Da	
	100753461	Tarkett doo	Industrijska zona 14	Bačka Palanka	100753461	Tarkett doo, Fabrika podnih obloga	Da	21/21	Da	5/5	Da	-	-	Da	
Bačka Topola	101443938	Agroindustrijski kombinat Backa Topola doo	Maršala Tita 61	Bačka Topola	101443938	Agroindustrijski kombinat Backa Topola ad, Kafilerija Zibel	Da	1/1	Da	1/1	Da	-	-	-	
	101444060	Perutnina Ptuj-Topiko d.o.o.za proizvodnjui promet živine i živinarskih proizvoda Bačka Topola	Petefi Brigade 2	Bačka Topola	101444060/1	Perutnina Ptuj - Topiko d.o.o Farma živine Repro centar	Da	1/1	Da	-	-	-	-	Da	
					101444060/2	Perutnina Ptuj - Topiko d.o.o Farma živine	Da	1/1	Da	-	-	-	-	Da	

Data quality

Data providers are facilities.

- Two types of data:
- 1. Master data Name, Address, Technical data
- 2. Annual data Emissions, Consumption, Products
- ✓ All master data are mandatory and typed once, except in the case of changing. SEPA compare entered master data with other data sources such as Agency for Business Registration, Custom office etc.
- ✓ Annual data are mandatory for prescribed emission sources within facility and pollutants. All data cells are protected from incorrectly entered data.
 - If all the required fields are not entered, the form can not be saved and user is forced to go back and correct mistakes.
 - Detailed control of entered numeric data is not possible but SEPA IT system, after entering, checks overlay values through the years.

Data quality

Data providers are facilities. They are not always interested to give a detailed answer, they want to avoid reporting, so it is necessary to encourage to fill data properly.

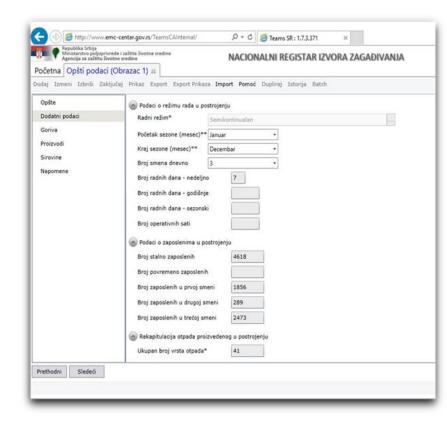
- Don't give the opportunity to operators to make a mistake.
- Minimize free writing (everybody can make a typing mistakes) especially in the cells which can be use for search or sort data
- Use code lists instead of words for search waste code from European waste catalog, NACE codes for economic activities etc.
- If the list code do not exist make your own.
- Use of all possible IT controls such as:
 - drop down lists,
 - > previously prepared queries,
 - > previously prepared reports,

Data quality check using overlay statistic method

2 01 01	struganje i obrada ferometala		300				***************************************		***************************************		
	8		300		2		9,3		10,8		13,7
19 12 02	metali koji sadrže gvožđe		350		,		289		444	4	415,3
5 01 01	papirna i kartonska ambalaža		190,1			4	81,9		421,9		433,3
15 01 07	staklena ambalaža		18812,6	1	881,4		19,1	1	247,6	4	401,9
9 12 04	plastika i guma		33		49	3			32,2		62,8
5 01 04	metalna ambalaža		98		3		18		12	***************************************	10
5 01 07	staklena ambalaža		375		198	***************************************	235		219		9:
0 03 01	mešani komunalni otpad	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,		0		4,8		4,8		4,2
0 02 01	biodegradabilni otpad		30		30		30		30		30
0 03 16	plivajuća pena/šljaka drugačiji od onih navedenih u 10 03 15				310	2262	03,5		290		335
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The Module for Quality Assurance of the submitted data

German UBA provide their QA IT module and we upgrade it and adopt it for using in our IT system.



THANK YOU FOR YOUR ATTENTION!