PRTRS AND SUSTAINABLE DEVELOPMENT

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OECD Environment, Health and Safety (EHS) Programme

36 Member countries, many partner countries and other stakeholders work together to develop and co-ordinate activities on chemical safety and biosafety on an international basis.

The main objectives of the Programme are to:

- Assist OECD Member countries' efforts to protect human health and the environment through improving chemical safety and biosafety
- Make chemical control policies more transparent and efficient and save resources for government and industry; and
- Prevent unnecessary distortions in the trade of chemicals, chemical products and products of modern biotechnology.



http://www.oecd.org/env/ehs/







Harmonising PRTRs

•PRTRs have been established throughout the world, but vary across countries.

• Harmonizing PRTRs enables global analysis and comparison between countries



Support countries to implement harmonised PRTRs by

- providing information on elements of a PRTR (e.g. chemical list and sectors) (2014, 2015)
- Updated the Council Act on PRTRs to set standard of harmonised PRTRs (2018)

Improving PRTRs

PRTR data are usually not directly measured, but estimated



Support countries to improve PRTR data quality by updating the Release Estimation Techniques to quantify pollutants

1. Point source (2013)

- 2. Non-point source (revising)
- 3. Off-site transfer (2017) 4. Release from products (2017)

Enhancing the use of PRTR data

PRTRs are rich sources of information



Support countries to use PRTR data by

• managing three PRTR databases

 developing good practices and identifying new applications of PRTR data

Framework on the Role of PRTRs in Global Sustainability Analyses (2017)

- Opportunities for using PRTR data for international-scale sustainability analyses
- Limitations and factors to consider in internationalscale applications of PRTR data
- Improving harmonisation of PRTR data to facilitate analyses



http://www.oecd.org/officialdocuments/publicdisplaydocument pdf/?cote=env/jm/mono(2017)7&doclanguage=en



- Contain a wealth of information applicable to sustainability analysis
- Enables comparison and evaluation of pollution prevention activities by facilities
- Allows for the possibility of conducting analyses at an international scale by combining data from multiple PRTRs

Global sustainability analyses using PRTR data can...

- Evaluate global trends
- Evaluate impacts of environmental policies and programmes
- Gain insight into human and ecosystem health issues
- Characterize transboundary movements of wastes
- Identify pollution prevention opportunities
- Review environmental performance and efficiency



- Not all facilities that release and transfer chemicals report to PRTRs
- Differences among PRTRs in chemical coverage, industry sector coverage, and reported data

Should consider...

- focusing analyses on chemicals and sectors that are most consistently reported across PRTRs
- considering whether data could be adjusted to improve data comparability among PRTRs



		US (TRI)	Canada (NPRI)	Japan (Japan PRTR)	Australia (NPI)	Europe (E-PRTR)	Chile (Chile PRTR)
oosal	Air Emissions						
	Point			0		0	
	Fugitive			0		0	
	Spills	0		0	0	0	0
	Road Dust	0		0	0	0	0
Disp	Storage/Handling	0		0	0	0	0
I pu	Other Non-point	0		0	0	0	0
an	Water Releases						
ses	Direct Discharges	0		0	0	0	0
ea	Spills	0		0	0	0	0
Re	Leaks	0		0	0	0	0
ite	Land Releases						
J-S	Landfills				0	0	0
ō	Underground Injection			0	0	0	0
	Land Treatment/Application			0	0	0	0
	Surface Impoundments		\bigcirc	0	0	0	0
	Other Land Releases			0	0	0	0

Due to differences in definitions between PRTR systems, not all categories exactly match similar categories for other PRTRs

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Partial



PRTR	Chemical Specific Thresholds	Benzene	Nickel and Nickel Compounds	Tetrachloroethylene	1,2-Dichloroethane	Di-(2-Ethylhexyl) Phthalate	Dichloromethane	Ethylbenzene	Trichloroethylene	Styrene
	Manufacture (kg/year)*	11,340	11,340	11,340	11,340	11,340	11,340	11,340	11,340	11,340
U.S.: TRI	Process (kg/year)*	11,340	11,340	11,340	11,340	11,340	11,340	11,340	11,340	11,340
	Otherwise Use (kg/year)*	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536
	De Minimis % Limit	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Canada:	Manufacture, Process, or Otherwise Use (kg/year)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
NPRI	Concentration	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Japan: PRTR	Usage (kg/year) Concentration	500	Nickel: 1,000 Compounds: 500 Nickel: 1% Compounds: 0.1%	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Usage (kg/year)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Australia: NPI	Fuel Combusted: Annual (kg/year) Energy Use (MWh)	NA	2,000,000 60,000	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	Power Rating (MW)	NA	20	NA	NA	NA	NA	NA	NA	NA
EU: E-PRTR	Release to Air (kg/year) Release to Water	1,000	50	2,000	1,000	10	1,000	NA 200	2,000	NA
	Release to Land (kg/year)	200	20	NA	10	1	10	200	NA	NA
Unile: PRTR	Usage (kg/year)	NA	NA	NA	NA	NA	NA	NA	NA	NA



Proposals for a Harmonised List of Reporting Sectors

- Long and short list of reporting sectors
- General thresholds (applied to all sectors)
- Sector-specific thresholds

Proposals for a Harmonised List of Pollutants

Long and short list of pollutants





- In 2015, countries adopted a set of goals to end poverty, protect the planet, and ensure prosperity
- Published "Transforming Our World: The 2030 Agenda for Sustainable Development" and defined 17 SDGs that encompass the economic, environmental and social dimensions of sustainability



- Goal 3: Ensure healthy lives and promote well-being for all at all ages
- Goal 6: Ensure availability and sustainable management of water and sanitation for all
- Goal 9: Build resilient infrastructure
- Goal 12: Ensure sustainable consumption and production patterns
- Goal 16: Promote peaceful and inclusive societies for sustainable development

Target 12.4

Environmentally sound management of chemicals and wastes



- Objective: use PRTR information in evaluating progress towards meeting SDGs
- Selected:
 - 14 pollutants
 - 7 PRTR systems (<u>AU, CA, CL, EU, JP, MX, US</u>)
 - focused on <u>manufacturing sector</u>
 - focused on <u>on-site releases to air and water</u>

Benzene	Nickel & nickel compounds	Tetrachloroethylene		
1,2-dichloroethane	Di-(2-ethylhexyl)phthalate	Dichloromethane		
Ethylbenzene	Trichloroethylene	Styrene		
Cadmium & compounds	Chromium & compounds	Sulfur dioxide		
Particulate matter	Mercury & mercury compounds			





On-site releases for 9 representative chemicals



Analyses to investigate

- Snapshot analyses most recent year of data
- Trend analyses 2008 to 2016
- Comparative analyses between PRTR systems
- Toxicity-weighted release quantities
- Economic information as an indicator (e.g. kg released/\$ value added)

Analytic Descriptors

- Pollutant release quantities (kg)
- Toxicity-weighted release quantities
- Pollutant release quantities per unit of production
- Toxicity-weighted release quantities per unit of production



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