



EEB

European
Environmental
Bureau

Thought Starter for PRTR 2.0 project(s)

**UNECE 9th WGP to PRTR Protocol
Item 5b (24/11/2022)**

Industrial Plant Data Viewer

Welcome to the European Environmental Bureau's data viewer for industrial plants in Europe. This contains a wide range of information related to air pollutant emissions, compliance, and impacts of emissions for all public power stations and district heating plants

There are two ways that you can explore the data:



Compare Plants

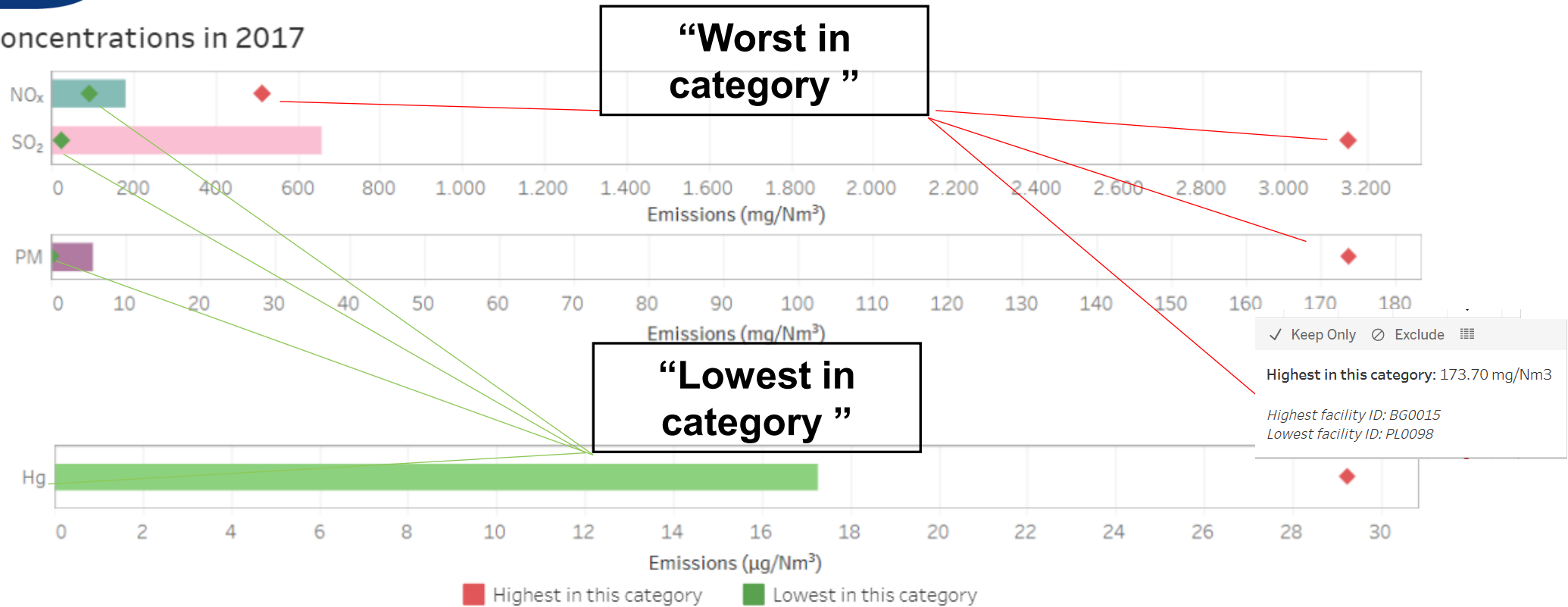
Compare emissions, health costs and permit limits across plants, countries and parent companies. Use filters to select subsets of comparable plants.



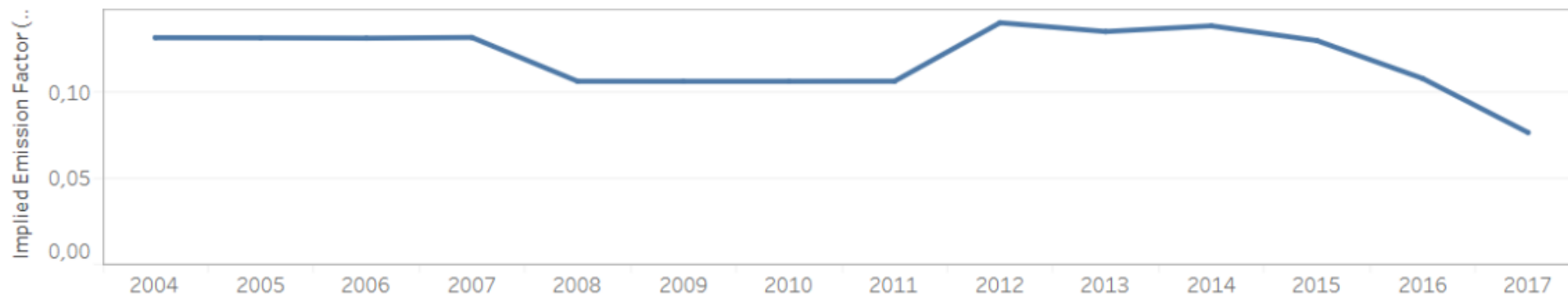
Pick a Plant

Select one or more plants to see detailed information on emissions, fuel use, derogations, compliance and impacts for the plant(s) in the later tabs. Use search boxes and filters to help find a plant.

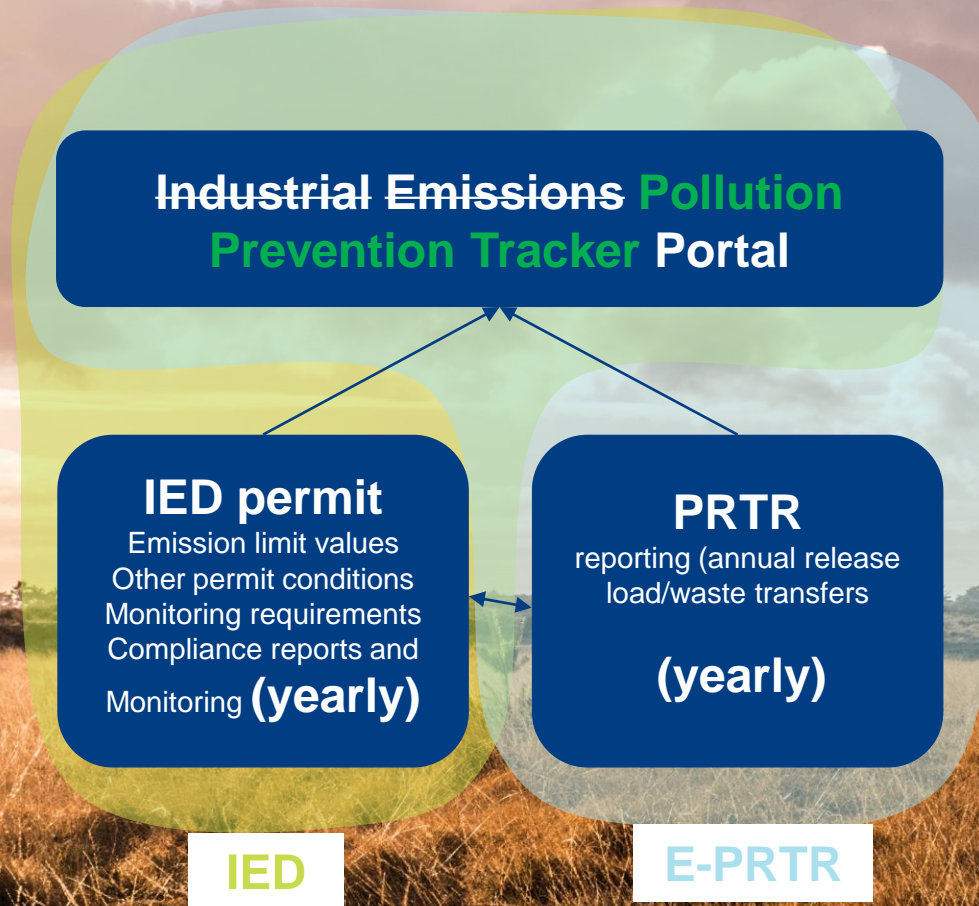
Concentrations in 2017



NO_x Implied emission factor



New work focus: Tracking pollution prevention (benchmarking of progress in zero pollution ambition)



- Streamlining of access to information requirements from EU Industrial Emissions Directive (IED), product regulation e.g. Ecodesign and reporting of E-PRTR / other instruments in **one, centralised user-friendly compliance and benchmarking promotion tool:**

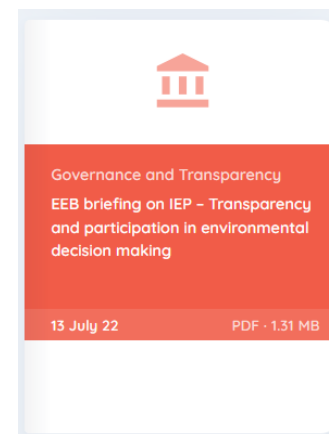
- ✓ The content of permit conditions should be directly incorporated in the Portal
- ✓ Need electronic input form for annual compliance report (Art.14 IED), operators to input directly with verification / validation controls remain on the competent authorities
- ✓ “Track and compare” (BAT / best environmental practice uptake)
- ✓ Define meaningful Key Performance Indicators (KPIs) at activity level (PRTR activity-based pollution reduction indicators, intensities)

RECOMMENDATIONS PRTR 2.0

“We need a new approach on reporting to enable compliance promotion and benchmarking, let the digital age work for achieving a high level of environmental and human health protection”

Main expectation points:

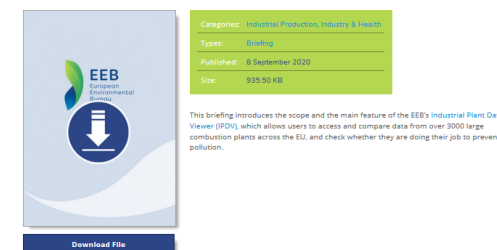
1. Input/output ratio metrics for ‘performance’ rating needed
2. Environmental footprint on the outputs means more contextual data (production / service provided)
3. Integrate consumption data / inputs (water, materials, chemicals, energy)
4. Extend substance groups / remove thresholds
5. Environmental Quality Standards link / comparability and tracking of performance
 - ✓ Integration of reporting streams in one place (**“global harmonized annual compliance report for PRTR activities”?**)
 - ✓ Compliance check Best Available Techniques / best practice
 - ✓ Integrating permit conditions (overcome language barriers)



EEB input to the E-PRTR impact assessment



Industrial Plants Data Viewer background briefing



OPPORTUNITIES IN PRTR CONTEXT

WHAT?	WHY?
<p>Environmental Management Systems include concept of “continuous improvement” and “benchmark of excellence”, pollution prevention / reduction performance indicators mentioned but without details on ambition/expectations</p>	<p>Concepts remain vague and not measurable, nor comparable at installation/activity level. How to identify hot-spots for pollution prevention opportunities, improve efforts sharing, identify common reference points? How to make better use of information aimed for preventing a problem rather than reporting (better) on it?</p>
<p>E-PRTR reporting thresholds remain on pollutants release, no data on inputs (water, energy, material use and type)</p>	<p>Kiev Protocol, sets out triple aim “to enhance public access to information through [...] coherent, integrated [...] (PRTRs) [...] facilitate public participation in environmental decision-making as well as contribute to the prevention and reduction of pollution of the environment.”</p>
<p>E-PRTR Absence of contextual information including production outputs / tool does not include the performance data of annual compliance report required by linked Integrated Pollution Prevention and Control (IED) framework</p>	<p>Tool to enable (env. human health) benchmarking of similar activities, compare performance / efforts made by operators as well as permit ambition. Make better use of already reported data for outcome oriented purpose</p>

POSSIBLE STEPS (1/2)

(KEY PRTR PERFORMANCE INDICATORS)

WP1: identify PRTR sector activities most suitable for case studies

- a) activities where there are competing solutions with various environmental and human health footprints?
- b) activities that may be considered as essential societal needs or with very clear topical focus e.g. energy production/conservation, water quality and supply services, transformation of plant/animal protein production and other foods and drinks, resource management, substitution of chemicals of concern / plastics, soil remediation/fertility?
- c) high impacting PRTR activities / product categories?

Possible focus case studies: cement, steel production, plastic production/use

WP2: define KPIs at PRTR sector level based on existing benchmark(s) of excellence, EU BAT / Best Environmental Management Practices, LCA approaches, Due diligence or Corporate Sustainability Reporting, other available data.

Define the proper metrics for identifying best ratio of environmental / human health impact v. service product provided by the activity. Focus e.g. on inputs (materials incl. energy/type and water impacts) associated with a given PRTR activity and the contribution and progress of industry towards the circular economy, toxic-free and decarbonization objectives, planetary boundaries etc

EXAMPLE (EMAS CORE INDICATORS)

Example 1 (indicators for EMAS reports) Source: Annex IV to EMAS Regulation (EC) No 1221/2009 (Section C.2 Core environmental performance indicators), Available at:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02009R1221-20190109>

Additional proposed indicators are in red

Key environmental performance areas	Core performance indicators	Description	Unit*
Energy	total direct energy consumption	corresponding to the total annual amount of energy consumed by the organisation	kWh, MWh, GJ
	total renewable energy consumption	corresponding to the total annual amount of energy consumed by the organisation that was generated from renewable energy sources	kWh, MWh, GJ
	total renewable energy generation	corresponding to the total annual amount of energy generated by the organisation from renewable energy sources	kWh, MWh, GJ
Material	annual mass-flow of key materials used		expressed in units of weight (e.g. kilograms or tonnes) or volume (e.g. m ³) or other metrics commonly used in the sector
	Share of recycled material		Expressed in share (%) if used resource inputs
Water	total annual water use by type		expressed in units of volume (e.g. litres or m ³)
	Water use intensity		Expressed in mass of water used per mass of (useful) production output
Waste	total annual generation of waste	broken down by type	expressed in units of weight (e.g. kilograms or tonnes) or volume (e.g. m ³), or in other metrics commonly used in the sector
	total annual generation of hazardous waste		
Land use with regard to biodiversity	Forms of land use with regard to biodiversity	Total use of land, total sealed land, total nature-oriented area on site, total nature-oriented area off site**	expressed in units m ² or ha
Emissions (air)	total annual emission of greenhouse gases	including at least emissions of C ₂ , CH ₄ , N ₂ O, HFCs, PFCs, NF ₃ and SF ₆	expressed in tonnes of CO ₂ equivalent

	total annual air emission	including at least emissions of SO ₂ , NO _x and PM	expressed in kilograms or tonnes
	Emission intensities		Expressed in mass of pollutant emitted per mass of (useful) production output / product amount
Emissions (water)	total emission (load) of pollutants to water		Expressed in kg per year
	Emission intensity		Expressed in mass of pollutant emitted per mass of (useful) production output / product amount
	Abatement efficiency		% of abated/recovered pollutant from income water source e.g. for Waste water treatment plant
<p>Note:</p> <p>*All units could be expressed as specific indicators – related to the production output (e.g. per ton of product).</p> <p>** A 'nature-oriented area' is an area dedicated primarily to nature preservation or restoration. Nature-oriented areas can be located on-site and include roof, façade, water drainages or <u>others</u> elements that have been designed, adapted or are managed in order to promote biodiversity. Nature-oriented areas can also be located outside the organisation site provided that the area is owned or managed by the organisation and is primarily dedicated to promoting biodiversity. Co-managed areas dedicated to promoting biodiversity can also be described, provided that the scope of co-management is clearly outlined. A 'sealed area' means any area where the original soil has been covered (such as roads) making it impermeable. This non-permeability can create environmental impacts</p>			

These basic KPIs could be further refined as follows:

- Total direct energy consumption: for better understanding of industry's decarbonisation/carbon neutral production the % of electrification (or % of total direct energy consumption due to electricity) could be reported.
- Annual mass-flow of key materials used: for better understanding of industry's circularity the % of recovered and/or recycled raw materials used (expressed as % of annual mass-flow of key materials used) could be reported.
- Total annual water use: for better understanding of industry's circularity the % of re-used and/or recycled water used (expressed as % of total annual water use) could be reported.

All KPIs could be expressed as specific indicators, i.e. related to the production output (e.g. per ton of product).

POSSIBLE STEPS (2/2)

(KEY PRTR PERFORMANCE INDICATORS)

WP3: (based on findings from WP 1 and 2) define a “KPI of excellence” reference point (or range) for the specific case study activities and provide recommendations for how to design and implement pollution prevention benchmarking (and associated reporting) tools.

WP4: ADD-ON PROJECT (for countries that require a permit for PRTR activities)

Step 1: design of electronic permit conditions report input form (by activity type/installation level) *Example: USA, Mexico and Canada*

<https://cfpub.epa.gov/rblc/index.cfm?action=Search.BasicSearch&lang=en> EU EEB IPDV
“compare plants” tab <https://eipie.eu/projects/ipdv/>

Step 2: propose a harmonised electronic annual compliance report input form (by activity type/installation level) *Examples: CZ, IT, see more here*

<https://eeb.org/library/industrial-plants-data-viewer-background-briefing/>
and <https://eipie.eu/wp-content/uploads/2022/01/Annex-Virtual-workshop-on-harmonised-electronic-annual-compliance-reportFIN.pdf>



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IPDV: <https://eipie.eu/projects/ipdv/>

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READING MATERIAL

- Dedicated briefing European Commission Proposal Regulation for Industrial Emissions Portal (IEP-R) https://eipie.eu/wp-content/uploads/2022/07/20220712-EEB-briefing-on-IEP_FIN.pdf
- 4 pager asks NGO IED / IEP-R <https://eeb.org/library/joint-civil-society-statement-on-the-revision-of-the-eu-ied-and-the-e-prtr/>
- Preliminary NGO assessment <https://eeb.org/library/ngo-preliminary-assessment-of-the-european-commissions-proposal-for-revised-ied-and-e-prtr/>
- Dedicated briefings IED / IEP-R <https://eipie.eu/briefings-by-eeb/>
- EEB work on industry <http://eeb.org/work-areas/industry-health/industrial-emissions/>