

# Norwegian PRTR

#### Activities, Pollutants and Releases - visualisation



## The PRTR-team in Norway

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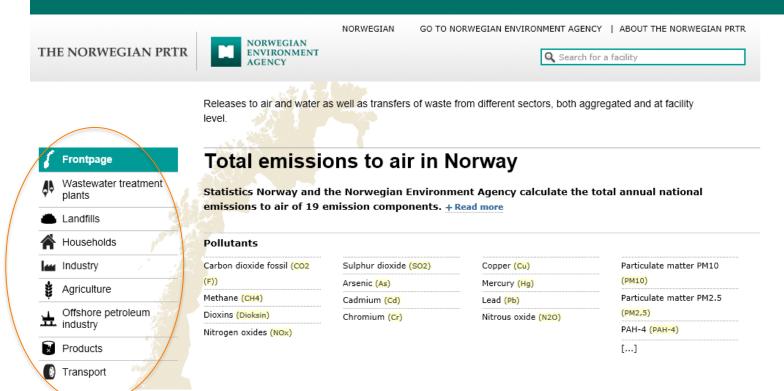
### Glenn Storbråten



In addition to PRTR, we also work with regulation of industry, giving permits and performing audits



## Norwegian PRTR – Activities





## Data sources

Sectors	Source
Industry	Web form (Internal)
Landfills	Web form (Internal)
Wastewater treatment plants	Web form (Internal)
Offshore petroleum industry	Environmental HUB (External)
Aqua culture	(External, but not yet presented)
Agriculture	Statistics Norway (External)
Households	Statistics Norway (External)
Transport	Statistics Norway (External)
Products	NEA (Internal)



### Norwegian PRTR – Activities and Emissions

- Facility-specific data on emissions and waste from:
  - Landbased industry (135 pollutants)
  - Offshore petroleum industry (61 pollutants)
  - Waste water treatment plants (11 pollutants, to water only)
  - Landfills (34 pollutants, to water only)

~1000 PRTR-facilities

 We are in a process of including emission data from aquaculture facilities - we have the data, but we have not prepared for presentation on the web yet



### Norwegian PRTR – Activities and Emissions

- Data on diffuse emissions from:
  - Transport (22 pollutants, to air only)
  - Agriculture (8 pollutants)
  - Households (17 pollutants, to air only)
  - Products in use (17 pollutants)



## Data Flow – Facility Specific Emissions

#### Permits with reporting requirements

Annual electronic reporting directly into database Quality control of reported emission data

#### Norwegian PRTR



### Pollutants From Industry – Some Examples

	Releases to air and water as well as transfers of w level.	vaste from different sectors, both aggregated and at facility				
Frontpage	<b>Overview pollutants</b>					
Wastewater treatment plants						
Landfills	Pollutants					
Households	Search content					
Industry	133 pollutants.					
Agriculture	Pollutants	<ul> <li>Comment</li> </ul>				
	1,1,1-trichloroethane	Chemical symbol: (TKE)				
Offshore petroleum industry	1,2-dichloroethane	Chemical symbol: (EDC)				
mausuy	Absorbable organic halogens	Chemical symbol: (AOX)				
Products	Aluminium	Chemical symbol: (AL)				
Transport	Ammonia	Chemical symbol: (NH3)				
Transport	Ammonium compounds	Chemical symbol: (NH4-N)				
	Anthracene	Chemical symbol: (Antracen)				
se county 🗸	Antibiotics	Chemical symbol: (Antibiotika)				
se municipality 🗸 🗸	Antimony	Chemical symbol: (SB)				
	Arsenic	Chemical symbol: (As)				
	Barium	Chemical symbol: (Ba)				
	BDE	Chemical symbol: (BDE)				
	Benzene, toluene, ethylbenzene, xylene	Chemical symbol: (BTEX)				
	Benzo(b)fluoranten	Chemical symbol: (C20H12)				
	Benzo(k)fluoranthene	Chemical symbol: (C20H12)				
	Benzofalpyrene	Chemical symbol: (BaP)				
	Benzo[g,h,i]perylene	Chemical symbol: (BGHIP)				
	Biological oxygen demand	Chemical symbol: (BOF7)				
	Biological oxygen demand	Chemical symbol: (BOF5)				
	Cadmium	Chemical symbol: (Cd)				
	Calcium	Chemical symbol: (CA)				
	Carbon dioxide	Chemical symbol: (CO2)				
	Carbon dioxide biomass	Chemical symbol: (CO2 (B))				



## Releases – Aggregated Data for Industry

15000 - Not report		NORWEGIAN	GO TO NORWEGIAN ENVIRONMENT AG	GENCY   ABOUT THE NORWEGIAN PRTR
Industry       Carbon dioxide (CO2)         Carbon dioxide is a colourless, odourless gas, denser than air that occurs naturally in the earth's atmosphere. Often carbon dioxide is called by its chemical name CO2. + Read more         Industry       Carbon dioxide is a colourless, odourless gas, denser than air that occurs naturally in the earth's atmosphere. Often carbon dioxide is called by its chemical name CO2. + Read more         Industry       Products         Products       Carbon dioxide (CO2) (in 1000 tonn per year)*         Industry       Industry         Industry       Compare to         202 2       2015 2         Industry       Compare to         202 2       2015 2         Industry       Industry         Industry       Compare to         202 2       2015 2         Industry       Industry         Industry       Industry         Industry       Compare to         2002 2       2015 2         Industry       Industry         Industry       Industry         Industry       Industry         Industry       Compare to         Industry       Industry         Industry       Industry         Industry       Industry         Industry       Industr	THE NORWEGIAN PRTR	NORWEGIAN ENVIRONMENT AGENCY	Q Sear	ch for a facility
Wastewater treatment plants       Carbon dioxide is a colourless, odourless gas, denser than air that occurs naturally in the earth's atmosphere. Often carbon dioxide is called by its chemical name CO2. + Read more         Landfills       Households         Households       Export to Excel         Agriculture       Offshore petroleum         Offshore petroleum       Industry         Products       2015          Transport       Compare to         1000 tonn)       Industry         10000			of waste from different sectors, both	aggregated and at facility
<ul> <li>Wastewater treatment plants</li> <li>Landfils</li> <li>Households</li> <li>Agriculture</li> <li>Offshore petroleum industry</li> <li>Products</li> <li>Transport</li> <li>Mosee county v</li> <li>Industry</li> <li>Mosee county v</li> <li>Industry</li> <li>Mosee municipality v</li> </ul>	Frontpage	Carbon dioxide (CO2)		
Landfills Households Agriculture Offshore petroleum industry Products Transport Hoose county Industry Hoose county Industry Hoose county Hoose c		Carbon dioxide is a colourless, odourles	ss gas, denser than air that occ	
Industry       Agriculture         Offshore petroleum       2015         industry       industry within a geographical area or a facility         Products       Releases of Carbon dioxide (CO2) (in 1000 tonn per year) *         Industry       1000 tonn)         prosee municipality       2000         15000       15000         15000       1000 tonn)         15000       15000	Landfills	atmosphere. Often carbon dioxide is ca	led by its chemical name CO2.	+ Read more
Agriculture       Compare to         Offshore petroleum       industry         Products       Transport         Transport       Releases of Carbon dioxide (CO2) (in 1000 tonn per year) *         Industry       Industry         1000 tonn       Image: Compare tone         1000 tone       Image	Households	Export to Excel		
Offshore petroleum       2002 ♥ 2015 ♥ industry within a geographical area or a facility .         Products       Releases of Carbon dioxide (CO2) (in 1000 tonn per year) *         Industry       1000 tonn)         cosee runnicipality       2000         1000       1000 tonn)	industry	Annual releases Releases per facility		
Industry Meter Performance of the meter o	Agriculture	Time interval Compare to		
Industry     View       000se county     (1000 tonn)       000se municipality     20000       10000     10000		2002 V 2015 V industry within	a <u>geographical area</u> or a <u>facility</u> .	
oose county     (1000 tonn)       oose municipality     2000       15000     15000       15000     15000       10000-     Related       Milisstatus i Norge       Karbondioksid (CO)	Products	Releases of Carbon dioxide (CO2)	(in 1000 tonn per year) *	
oose county vorticipality vorticipality 20000 15000 1000 1000 1000 1000 1000 1000 100	) Transport	Industry		
2000 15000 100000 10000 10000 10000 10000 10000 10000 10000 10000 10	oose county	(1000 tonn)		
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500-		10000		Karbondioksid (CO2)
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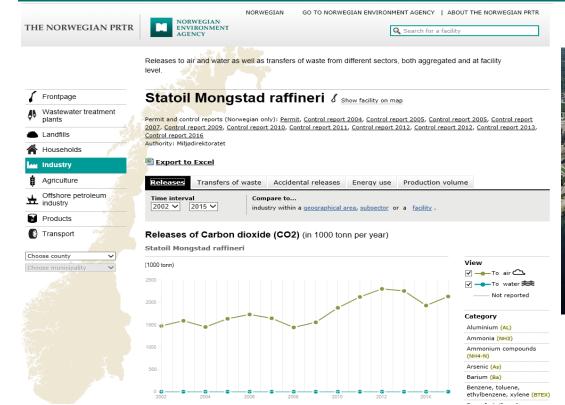


## Releases – Facility Level

		NORWEGIAN GO TO	NORWEGIAN ENVIRON	MENT AGENCY   A	ABOUT THE NORWEGIAN P
HE NORWEGIAN PRTR	NORWEGIAN ENVIRONMENT AGENCY			Q Search for a fac	ility
	Releases to air and water as v level.	vell as transfers of was	e from different secto	rs, both aggregate	ed and at facility
Frontpage	Carbon dioxid	e (CO2)			
Wastewater treatment	Carbon dioxide is a colour	less, odourless gas			•
Landfills	atmosphere. Often carbor	i dioxide is called by	y its chemical nam	e CO2. + Read m	lore
Households	Export to Excel				
Industry	Annual releases Release	es per facility			
Agriculture	Time interval				
Offshore petroleum	2002 🗸 2015 🗸				
Products	Year 2015 : Industry: Emi	ccions of Carbon di	ovido (CO2) (		Related
Transport	Facility	Emissions to	Discharges to water	Total	<u>Miljøstatus i Norge:</u> <u>Karbondioksid (CO2)</u>
pose county 🗸	Statoil mongstad raffineri	2,130.16 (B)	(I.R.)	2,130.16	
oose municipality 🗸 🗸	Yara norge, yara glomfjord	1,345.70 (B)	(I.R.)	1,345.70	
	Gassco kårstø	1,156.00 (B)	(I.R.)	1,156.00	
	Hammerfest Ing	1,024.30 (B)	(I.R.)	1,024.30	
	Norcem brevik	821.34 (B)	(I.R.)	821.34	
	Yara norge, yara porsgrunn	805.13 (B)	(I.R.)	805.13	
	Hydro aluminium, sunndal	608.60 (B)	(I.R.)	608.60	
	Noretyl as	464.00 (B)	(I.R.)	464.00	
	Elkem salten	436.20 (B)	(I.R.)	436.20	
	<u>Statoil asa tjeldbergodden</u> <u>metanolfabrikk</u>	335.60 (B)	(I.R.)	335.60	
	Esso norge, slagentangen	328.29 (B)	(I.R.)	328.29	
	Hydro aluminium, karmøy	320.85 (B)	(I.R.)	320.85	



## Releases – Facility Level - Trends







## Further improvements

- Maps with different layers
- Inclusion of aquaculture data
- Better search filters according to the Protocol's activity structure
- Data on total emissions to water
- Better links between emissions and environmental status





## Other relevant websites in Norway

- <u>www.environment.no</u> (State of the Environment Norway)
  - Aims to provide you with the latest information about the state and development of the environment.
  - More detailed scientific presentations.
  - Information about legislation and international agreements, environmental targets and relevant links.
- https://vann-nett.no/portal/#/mainmap
  - Detailed information on status for specific water bodies



## www.norskeutslipp.no/en





#### www.miljødirektoratet.no