

The Norwegian PRTR

- a brief presentation

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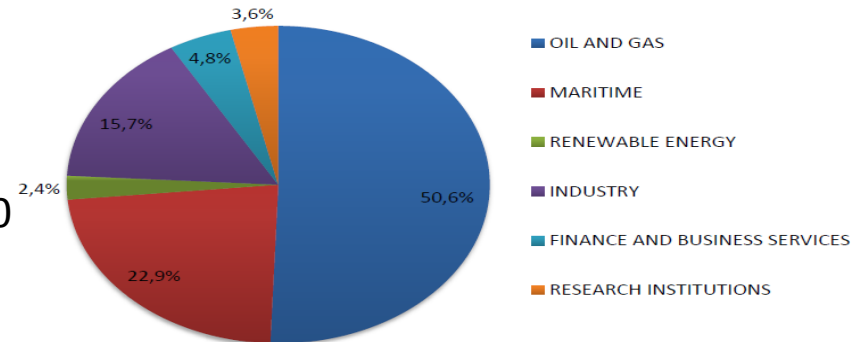
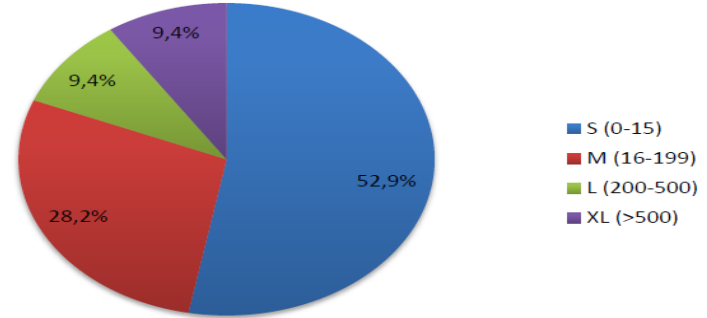
Innovation Norway

- Innovation in Norwegian trade and industry
- Making Norwegian businesses competitive domestically and internationally
- Promoting the reputation of Norwegian businesses



Norwegian business in Brazil

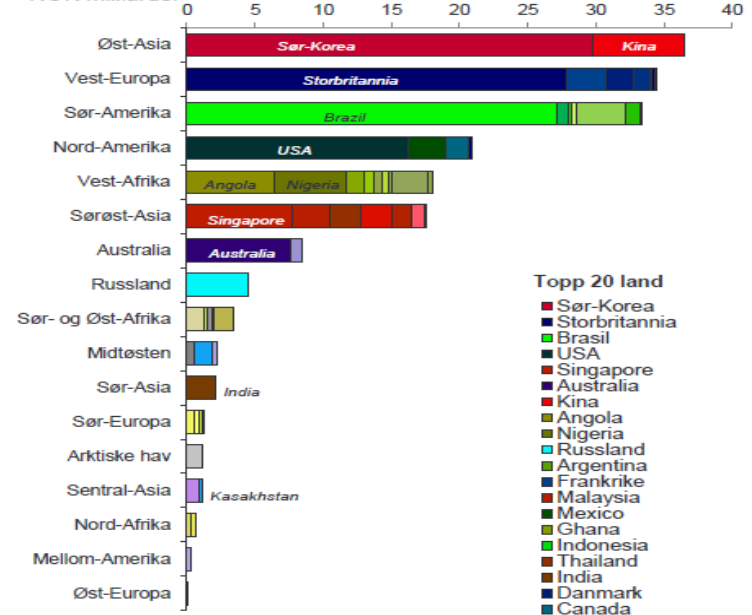
- Investments 23,8 BUSD, mainly 2009-today
 - Does not include Amazon fund or Pension Fund
 - 9 major companies contribute 90% of investments
- 67% of investments in O&G related activities
- More than 100 Norwegian companies, 82% in Rio de Janeiro
 - Most are SMEs
 - 70% oil&gas/maritime
- Norwegian companies employ more than 18,000 people in Brazil



Norway and Brazil

- Brazil is one of the the world's largest offshore oil&gas market
- Brazil is the 3rd largest single market for Norwegian suppliers (27 billion NOK) – and growing
- 25% of advanced offshore vessels in Brazil under Norwegian control
- Norwegian companies have invested more than 23 billion USD in Brazil
 - Norway is the 7th largest investor (FDI) in Brazil
- More than 100 Norwegian companies operating in Brazil
- BN21 agreement signed November 2013 – RD&I cooperation
- Several MoUs between Norwegian and Brazilian clusters

Figur 4.2: Internasjonal omsetning, rangert etter region, per land*
NOK milliarder



Prioritized sectors in the Brazilian market

- Oil&Gas
- Maritime
- Energy and environment
- Bioeconomy
- Travel and tourism

Norway's top ten companies

| Rangering | Firmanavn | Omsetn (mill) | Driftsres (mill) |
|-----------|--------------------|---------------|------------------|
| 1 | Statoil | 482,800 | 14,900 |
| 2 | Telenor | 128,175 | 22,761 |
| 3 | Yara International | 111,897 | 14,104 |
| 4 | Norsk Hydro | 88,667 | 8,258 |
| 5 | DNB | 79,268 | 34,083 |
| 6 | NorgesGruppen | 76,224 | 3,170 |
| 7 | Reitangruppen | 62,284 | 3,426 |
| 8 | KLP | 58,302 | 26,588 |
| 9 | Sapa | 55,397 | 528 |
| 10 | Statkraft | 53,094 | 3,814 |

Norwegian PRTR – Current Status

Scope of the Protocol: Activities, Pollutants and Releases



Norwegian PRTR – Activities

THE NORWEGIAN PRTR



NORWEGIAN

GO TO NORWEGIAN ENVIRONMENT AGENCY | ABOUT THE NORWEGIAN PRTR

Search for a facility

Releases to air and water as well as transfers of waste from different sectors, both aggregated and at facility level.

Frontpage

Wastewater treatment plants

Landfills

Households

Industry

Agriculture

Offshore petroleum industry

Products

Transport

Total emissions to air in Norway

Statistics Norway and the Norwegian Environment Agency calculate the total annual national emissions to air of 19 emission components. [+ Read more](#)

Pollutants

Carbon dioxide fossil (CO₂)

(F)

Methane (CH₄)

Dioxins (Dioksin)

Nitrogen oxides (NO_x)

Sulphur dioxide (SO₂)

Arsenic (As)

Cadmium (Cd)

Chromium (Cr)

Copper (Cu)

Mercury (Hg)

Lead (Pb)

Nitrous oxide (N₂O)

Particulate matter PM10

(PM₁₀)

Particulate matter PM2.5

(PM_{2,5})

PAH-4 (PAH-4)

[...]

Total emissions to air – link to the Air Convention

- Total emissions to air for 19 different pollutants from all large sources are shown on the front page
- These data are reported under the different Protocols under the Air Convention (Some minor deviations for certain pollutants due to different calculation methods)
- These data sets are calculated in collaboration with Statistics Norway (based on activity data and emission factors, top down method)

Norwegian PRTR – Activities and Emissions

- **Facility-specific data on emissions and waste from:**
 - Landbased industry (129 pollutants)
 - Offshore petroleum industry (61 pollutants)
 - Waste water treatment plants (11 pollutants, to water only)
 - Landfills (34 pollutants, to water only)

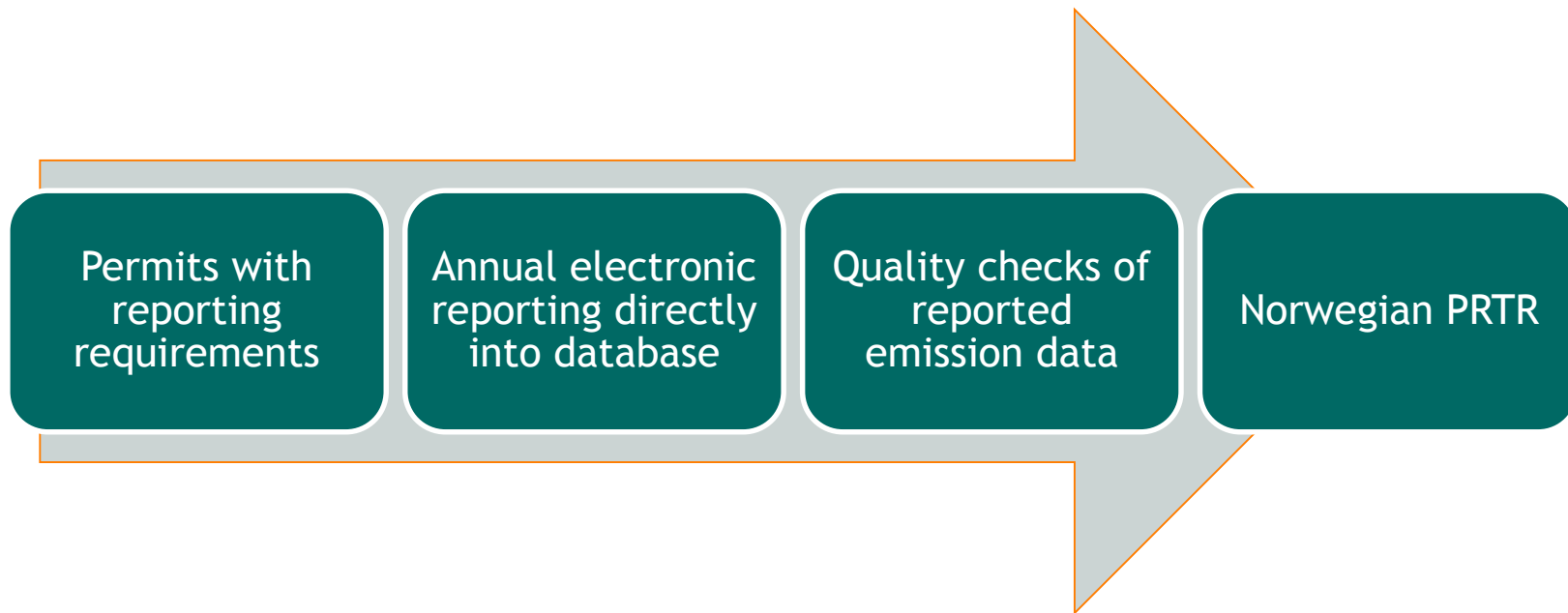
~1000 PRTR-facilities

- **We are in a process of including emission data from aquaculture plants - we have the data, but we need to do a quality check**

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



Pollutants From Industry – Some Examples

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- Frontpage
- Wastewater treatment plants
- Landfills
- Households
- Industry**
- Agriculture
- Offshore petroleum industry
- Products
- Transport

Choose county

Choose municipality

Overview pollutants

Pollutants

Search content

129 pollutants.

Pollutants

[1,1,1-trichloroethane](#)

[1,2-dichloroethane](#)

[Absorbable organic halogens](#)

[Aluminium](#)

[Ammonia](#)

[Ammonium compounds](#)

[Anthracene](#)

[Antibiotics](#)

[Antimony](#)

[Arsenic](#)

[Barium](#)

[BDE](#)

[Benzene, toluene, ethylbenzene, xylene](#)

[Benzofg,h,ilperylene](#)

[Biological oxygen demand](#)

[Biological oxygen demand](#)

[Cadmium](#)

[Calcium](#)

[Carbon dioxide](#)

[Carbon dioxide biomass](#)

[Carbon dioxide fossil](#)

Comment

Chemical symbol: (TKE)

Chemical symbol: (EDC)

Chemical symbol: (AOX)

Chemical symbol: (AL)

Chemical symbol: (NH3)

Chemical symbol: (NH4-N)

Chemical symbol: (Antracen)

Chemical symbol: (Antibiotika)

Chemical symbol: (SB)

Chemical symbol: (As)

Chemical symbol: (Ba)

Chemical symbol: (BDE)

Chemical symbol: (BTEX)

Chemical symbol: (BGHIP)

Chemical symbol: (BOF7)

Chemical symbol: (BOF3)

Chemical symbol: (Cd)

Chemical symbol: (CA)

Chemical symbol: (CO2)

Chemical symbol: (CO2 (B))

Chemical symbol: (CO2 (F))

Releases – Aggregated Data for Industry

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Releases to air and water as well as transfers of waste from different sectors, both aggregated and at facility level.

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](#)

[Export to Excel](#)

Annual releases

Releases per facility

Time interval

2002 2015

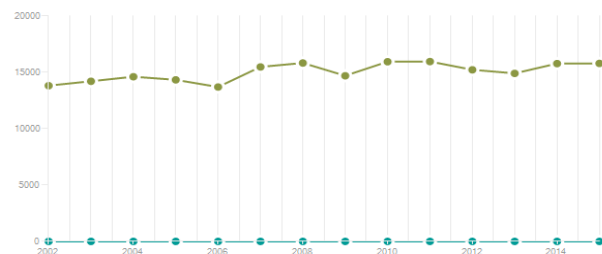
Compare to...

industry within a [geographical area](#) or a [facility](#)

Releases of Carbon dioxide (CO₂) (in 1000 tonn per year) *

Industry

(1000 tonn)



View

- ☒ To air
- ☒ To water
- ☐ Not reported

Related

[Miljøstatus i Norge: Karbondioksid \(CO₂\)](#)



Releases – Facility Level

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Export to Excel

Annual releases

Releases per facility

Time interval

2002 2015

Year 2015 : Industry: Emissions of Carbon dioxide (CO₂) (measured in 1000 tonn)

| Facility | Emissions to air | Discharges to water | Total |
|-----------------------------------------------------------|------------------|---------------------|----------|
| Statoil mongstad raffineri | 2,130.16 (B) | (I.R.) | 2,130.16 |
| 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 lng | 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 |
| Statoil asa tjeldbergodden metanolfabrikk | 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 |

Related

[Miljøstatus i Norge: Karbondioksid \(CO₂\)](#)



Releases – Facility Level - Trends

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Releases to air and water as well as transfers of waste from different sectors, both aggregated and at facility level.

Statoil Mongstad raffineri [Show facility on map](#)

Permit and control reports (Norwegian only): [Permit](#), [Control report 2004](#), [Control report 2005](#), [Control report 2005](#), [Control report 2007](#), [Control report 2009](#), [Control report 2010](#), [Control report 2011](#), [Control report 2012](#), [Control report 2012](#), [Control report 2013](#), [Control report 2016](#)

Authority: Miljødirektoratet

[Export to Excel](#)

Releases

Transfers of waste

Accidental releases

Energy use

Production volume

Time interval

2002

2015

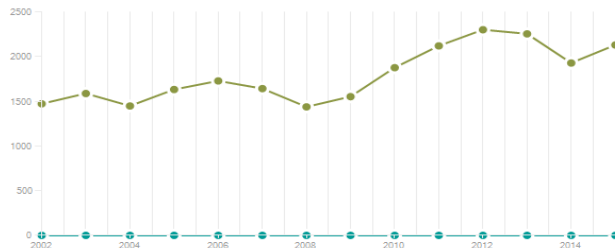
Compare to...

industry within a [geographical area](#), [subsector](#) or a [facility](#).

Releases of Carbon dioxide (CO₂) (in 1000 tonn per year)

Statoil Mongstad raffineri

(1000 tonn)



View

- ☒ To air
- ☒ To water
- ☐ Not reported

Category

- Aluminium (AL)
- Ammonia (NH₃)
- Ammonium compounds (NH₄-N)
- Arsenic (As)
- Barium (Ba)
- Benzene, toluene, ethylbenzene, xylene (BTEX)



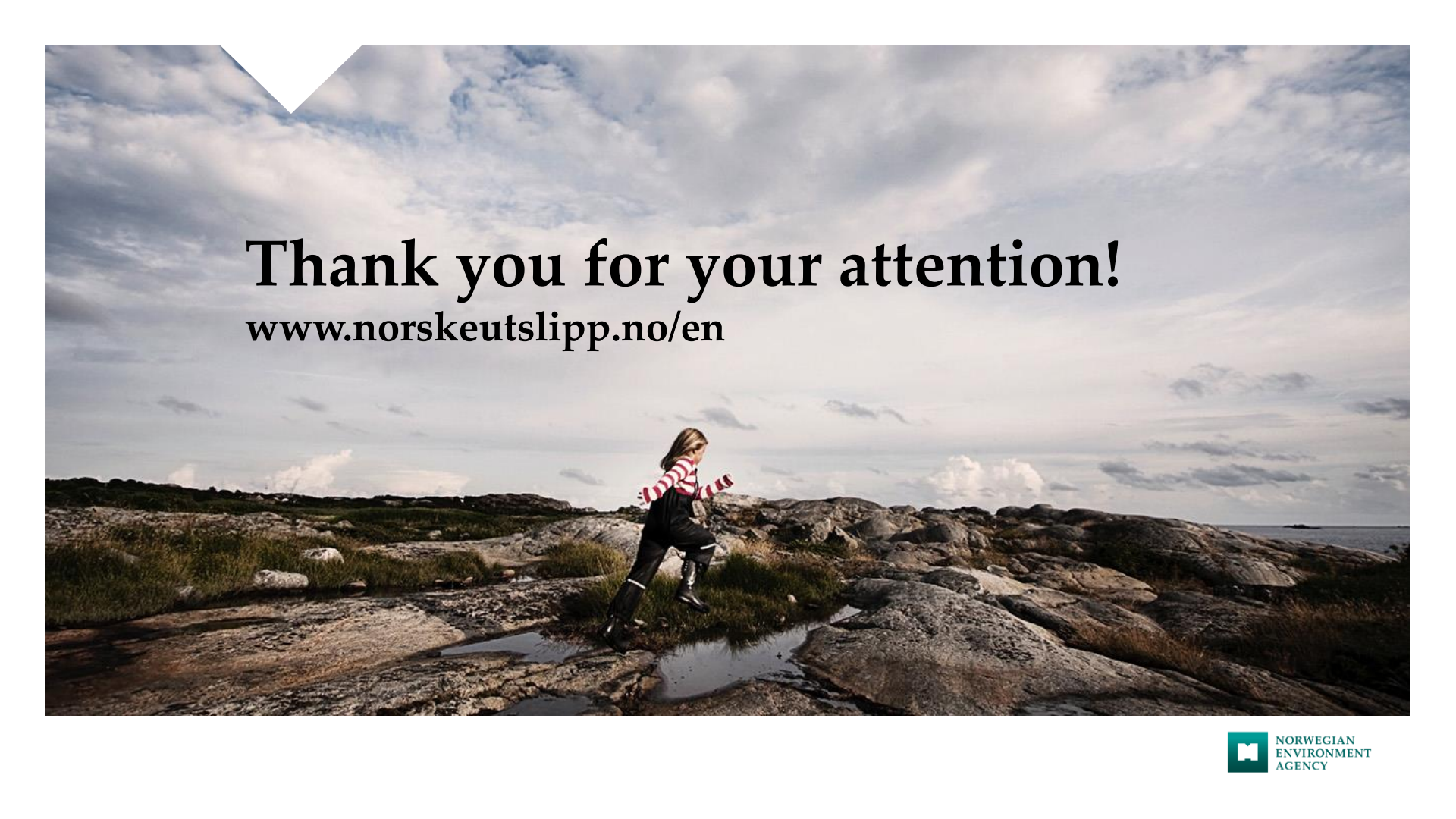
Further improvements

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



Other relevant websites in Norway

- www.environment.no (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.
- <http://vann-nett.no/portal/map>
 - Detailed information on status for specific water bodies

A person with long blonde hair, wearing a red and white striped long-sleeved shirt and black overalls, is captured in mid-air, jumping over a rocky, mossy landscape. The ground is covered with large, flat rocks and patches of green grass. In the background, a body of water is visible under a vast, cloudy sky. The overall scene conveys a sense of outdoor adventure and nature.

Thank you for your attention!

www.norskeutslipp.no/en



www.miljodirektoratet.no