



MinFuture

Information Flows

Add subtitle

Maren Lundhaug, Tom Heldal – NTNU, NGU

12/4/2017



MinFuture is funded by the Horizon 2020 Framework Programme of the European Union under Grant Agreement no. 730330. The contents of this document are the sole responsibility of MinFuture and can in no way be taken to reflect the views of the European Union.

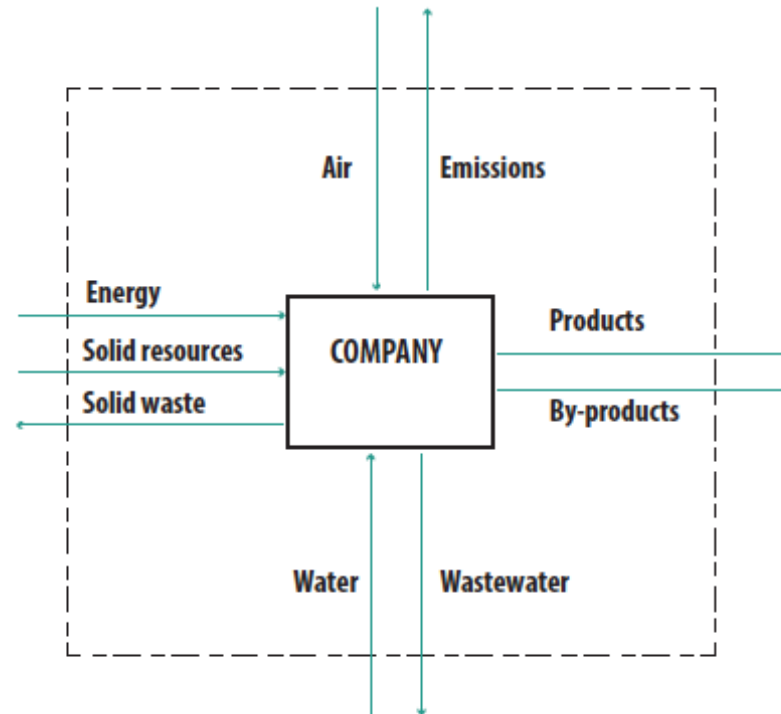
www.minfuture.eu

Why are information flows important?

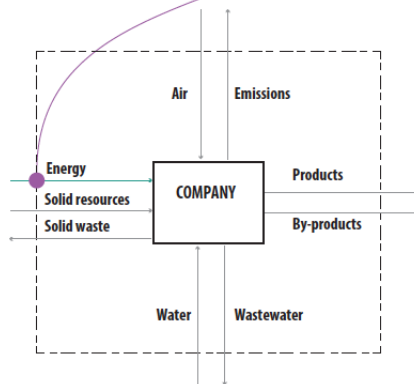
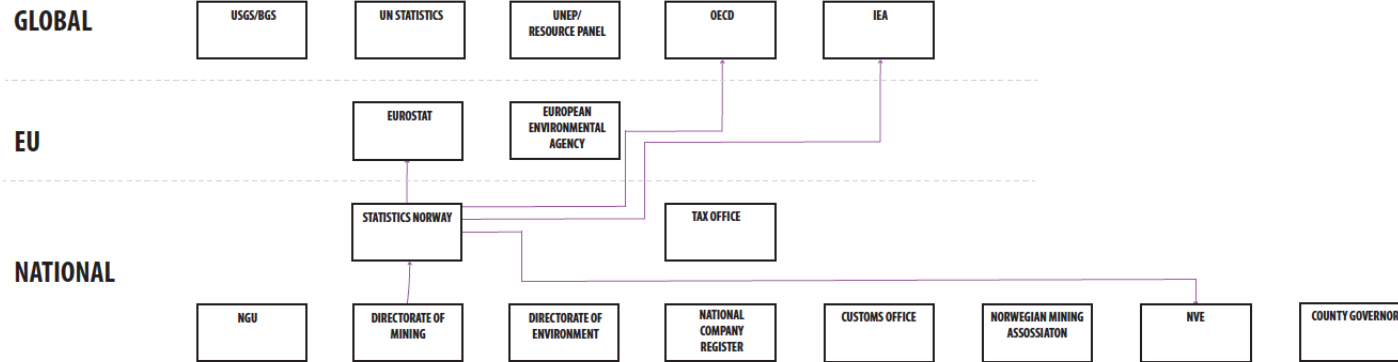


- Understanding the primary source of the data can help us to better understand what they represent.
- Information flows can tell us **how** the data is gathered.
 - And it can help us to understand **where** in the system the measurement is taken.
- Just as important is getting an overview of what we **do not know**.
 - And make this explicit in our systems.
- By doing this, we aim to develop more transparent and robust systems.

A geographically explicit company



Energy



ENERGY DATA

Aim: Monitor the energy balance in Norway
Level: National data

Collection: SSB on behalf of The Norwegian Water Resources and Energy Directorate (NVE) collects Energy data yearly based on surveys from selected companies, the total energy use is estimated. In addition SSB sends the data as per agreement with NVE the data further to Enova and the Ministry of Environment. SSB processes the data before handing them over to NVE.

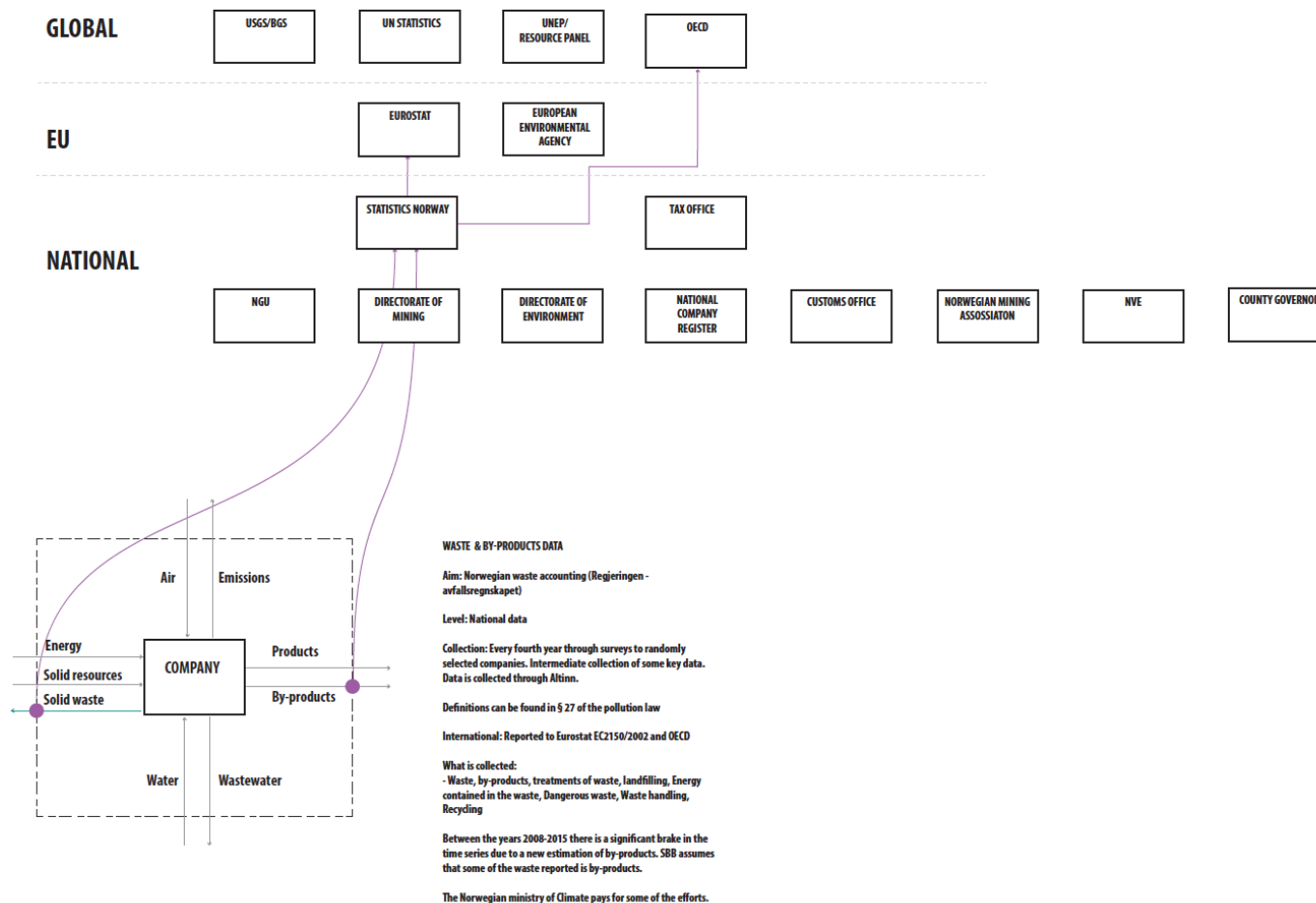
The general rule is not to publish data if there are fewer than three enterprises in an industry. In cases with less than three enterprises in an industry group, data are confidential and aggregated up to a more aggregated industry group before publishing.

Definitions can be found in § 27 of the pollution law

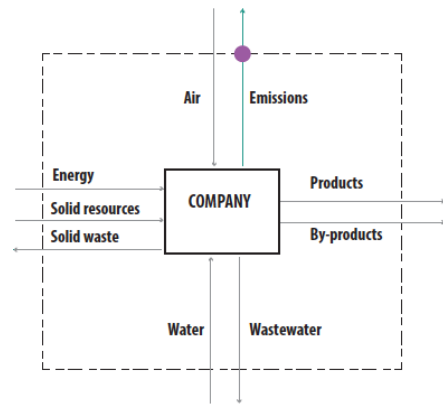
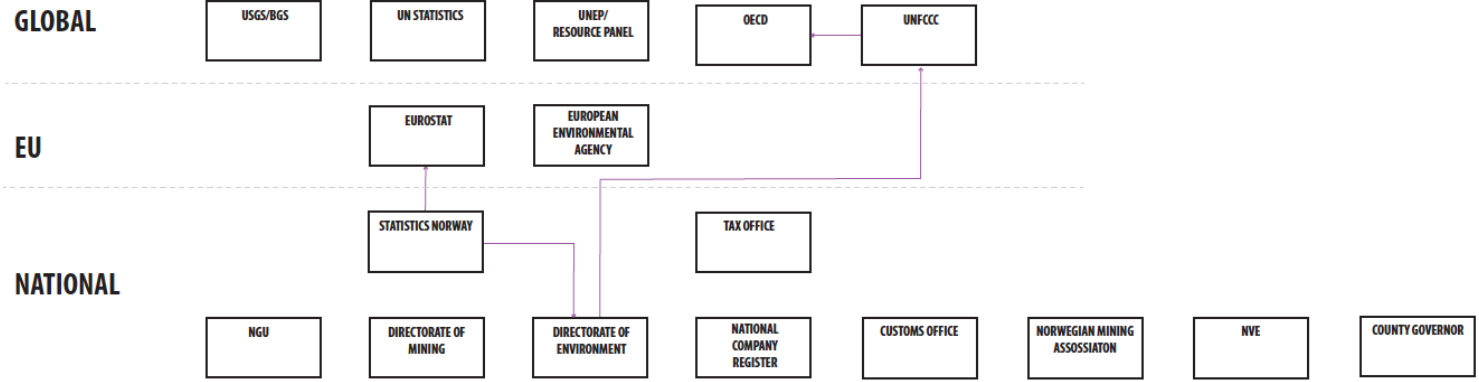
International: Reported every other year to Eurostat

What is collected: Gwh and Mill NOK in energy costs

Solid waste & by-products



Emissions



EMISSIONS DATA

Aim: UNFCCC reporting requirements

Units: CO2 eq.

Level: National & Regional data

Collection: The data is mainly estimated. Data is published twice a year, time series are available from 1990

International: Reported to Eurostat, The directorate of Environment further reports to UNFCCC.

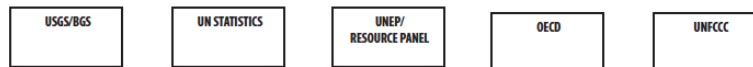
What is collected: Emissions of GHGs from Norwegian territory and of anthropogenic origin. Includes carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O) and fluorinated gases (HFC, PFC og SF6).

The directorate of Environment pays for some of the efforts.

Products



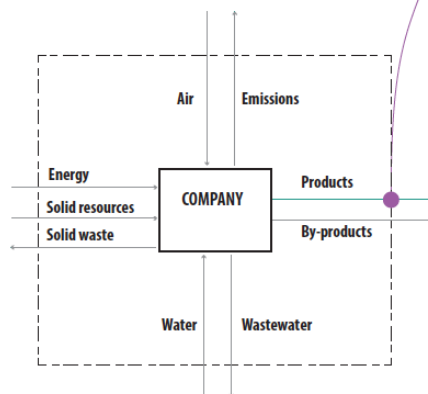
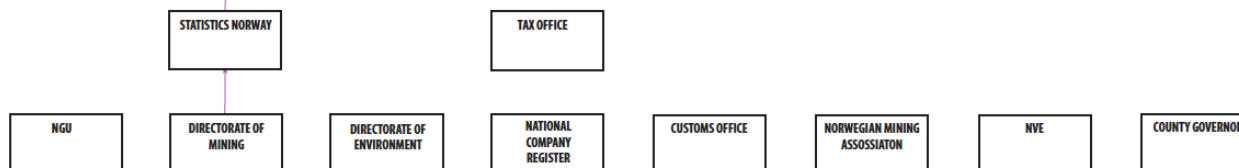
GLOBAL



EU



NATIONAL



PRODUCTION - SSB - MONETARY

Aim: Norwegian National Accounting, EU sold production statistics PRODCOM

Units: 1000 NOK of sold products

Level: National

Collection: Yearly, time series available from 1927, available online from 1976. Companies/Entities with less than 10-15-20 employees are excluded from the statistics, depending on the type of goods produced. Collection is done through surveys. Data will only be published if there are three or more producers, it will not be published if for instance two producers have more than 90% of the total production.

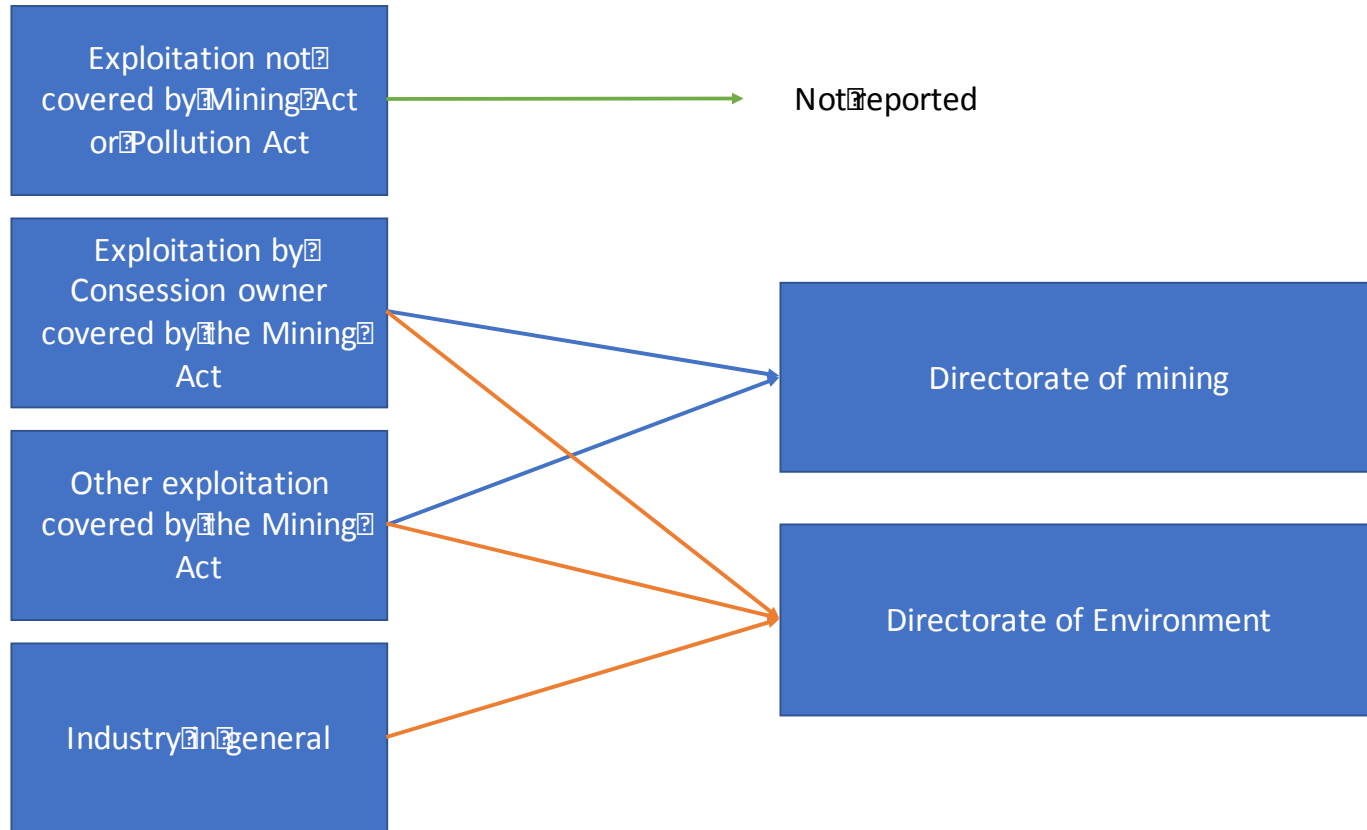
International: Reported to Eurostat

What is collected:
Only sold production, not produced. But numbers on actual production is also collected

Reporting minerals, Norwegian case

Reporting of production

Red: only disposals and emissions
Blue: production (and «not used»
and «reserves»)



Reporting to Norwegian authorities from enterprises



- To Directorate of mining: Production, remaining resources, disposals of raw rocks (leftover from mining when not covered by the pollution act). Only concession owners or other extractive industries covered by the Mining Act (approx. 1200 registered enterprises). *Incomprehensive reporting of resources and disposals*
- To Directorate of Environment: emissions to the air, disposal of tailings and other material, justified from coverage of the Pollution Act (660 enterprises, not only mining). «Pollution threshold» for reporting duties
- Financial reporting (for taxation etc.) to Brønnøysund Archive and other authorities (not so relevant)

Reporting from Norwegian authorities



- Export/import of raw materials and other products reported by the customs authorities

Non-reporting



- Extraction and production of mineral products (predominantly aggregate) NOT covered by the Mining Act (from tunnels and other subsurface construction activities, on-surface construction activities)

Explanation: if the goal is a tunnel or i.e. a industrial area, the aggregate extracted for obtaining this goal (no matter how many years) is not regulated under the Mining Act, and therefore not subject to mandatory reporting to the government. This is an increasing amount of Norwegian produced aggregate.

Exploration – money used



- Reporting by concession owners and other enterprises covered by the Mining Act (to Mining Directorate)
- Voluntarily reporting by enterprises exploring «state minerals» in Norway to the Mining Directorate
- No system for reporting exploration of «non-state minerals» except what is carried out by companies producing under the Mining Act

Resources and reserves



- Option for producing companies under the Mining Act to report «reserves», but few does it and few cares
- No other duties to report, except those link to the international stock market (only for noted companies, not for others)
- NGU try to report «state of nation» each year from own knowledge (historic, own investigations and voluntarily from companies)

Stocks and streams of secondary resources



- Accountance of delivery of goods for re-circulation
- No other reporting
- NGU started to register stocks (disposals) of anthropogenic rock material, predominantly leftovers from quarrying and construction

Barriers & how to overcome them



- What is in it for the reporter?
 - Altinn
- The reporting criteria changes from country to country.
- Confidentiality

