

On-going development of EEA's water resource efficiency indicators

Emission intensity indicators

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Resource efficiency

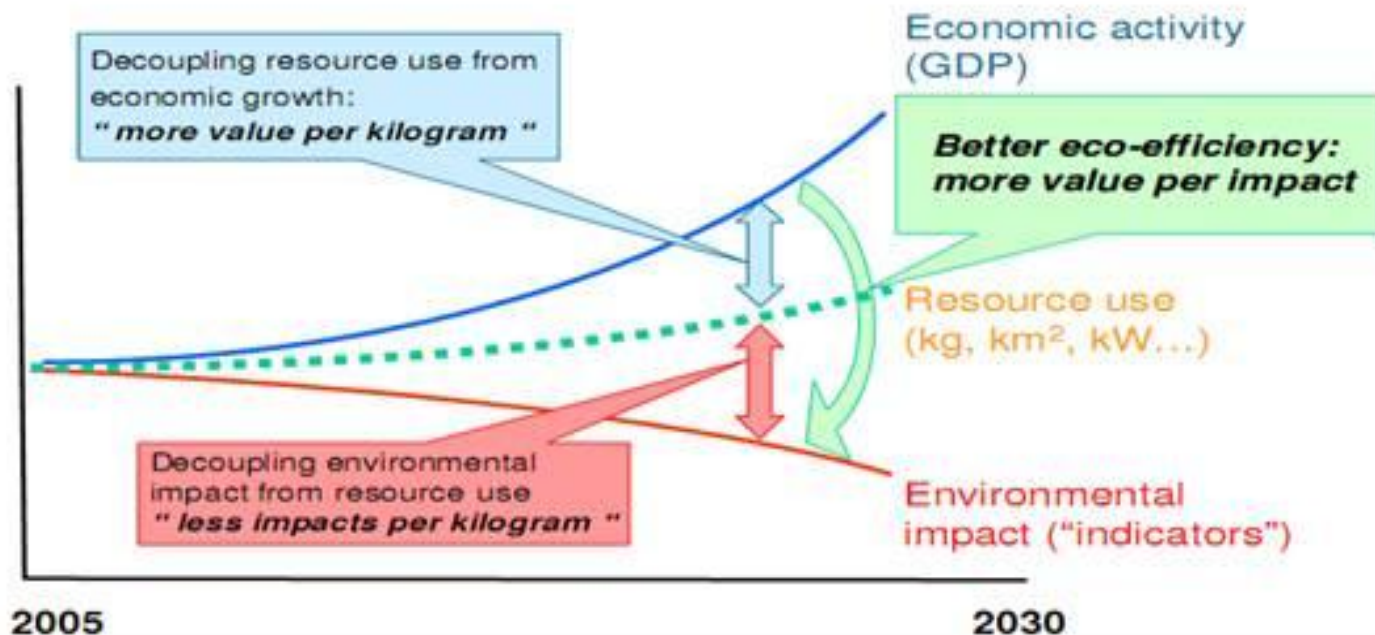
- Resource efficiency is a measure of how much resources is required and how much environmental impact is generated to achieve a required outcome (production, service).
- Assessment of effectiveness (are we doing right? Are we meeting targets) is not enough.
- Assessment of efficiency indicates how well we are doing and thus showing directions for further improvement.

Elements of resource efficiency



Decoupling concept

- Term decoupling describes a situation where a growth of environmental pressure/impact is less than growth of a given economic driving force (e.g. in GDP)



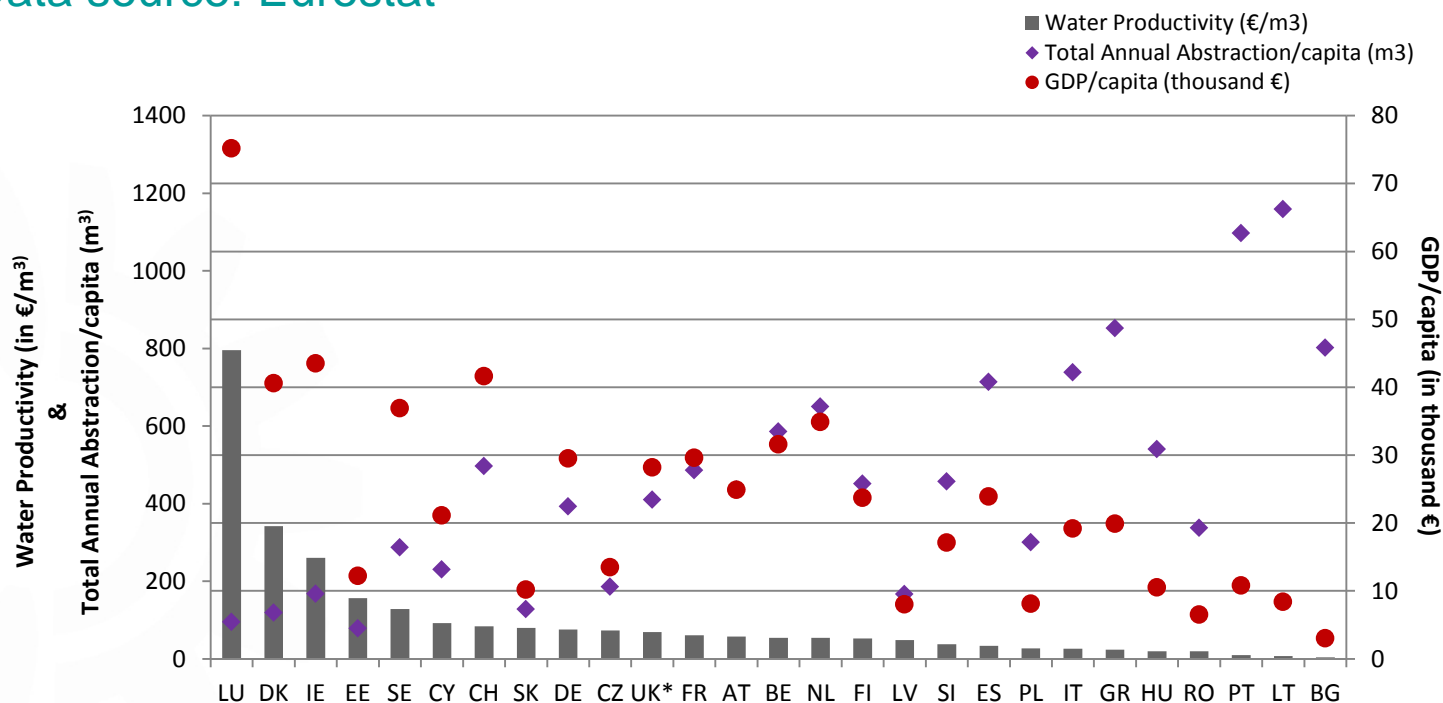
Decoupling (resource efficiency) indicators

- use of resources for goods and services
- emission intensity of goods and services
- energy intensity of goods and services

Examples of EEA's resource efficiency indicators

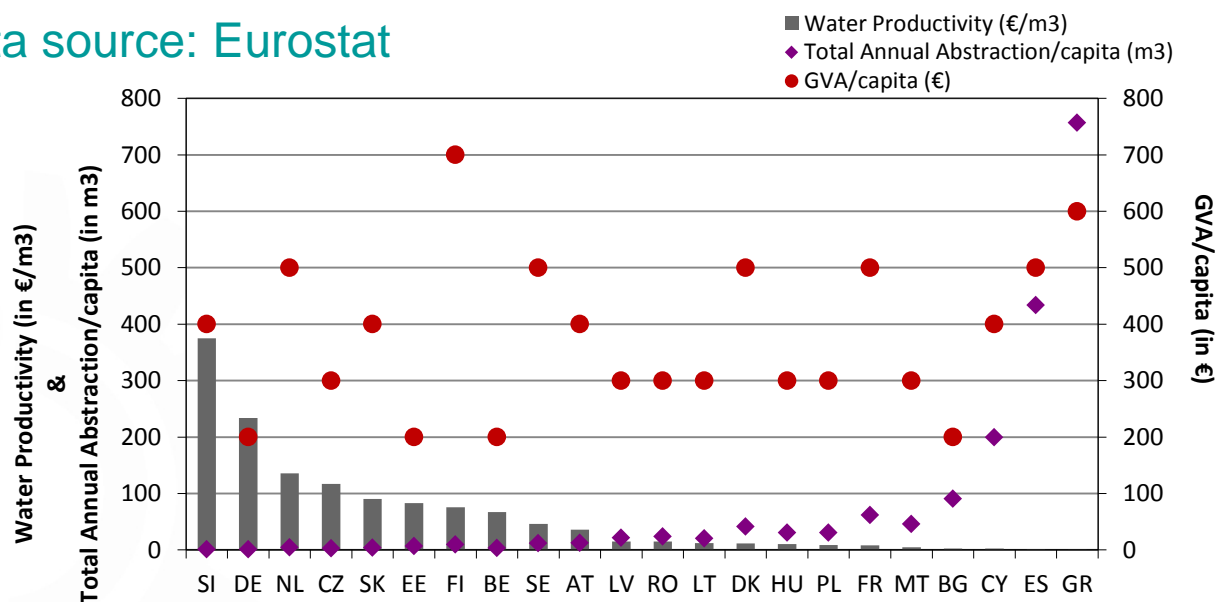
Water productivity

- **Water Productivity (€/m³)** in EU countries, depicting the economic activity (GDP/capita) and the resource use (total annual water abstraction/capita), ranked from high to low productivity.
- Data source: Eurostat



Water productivity- agriculture

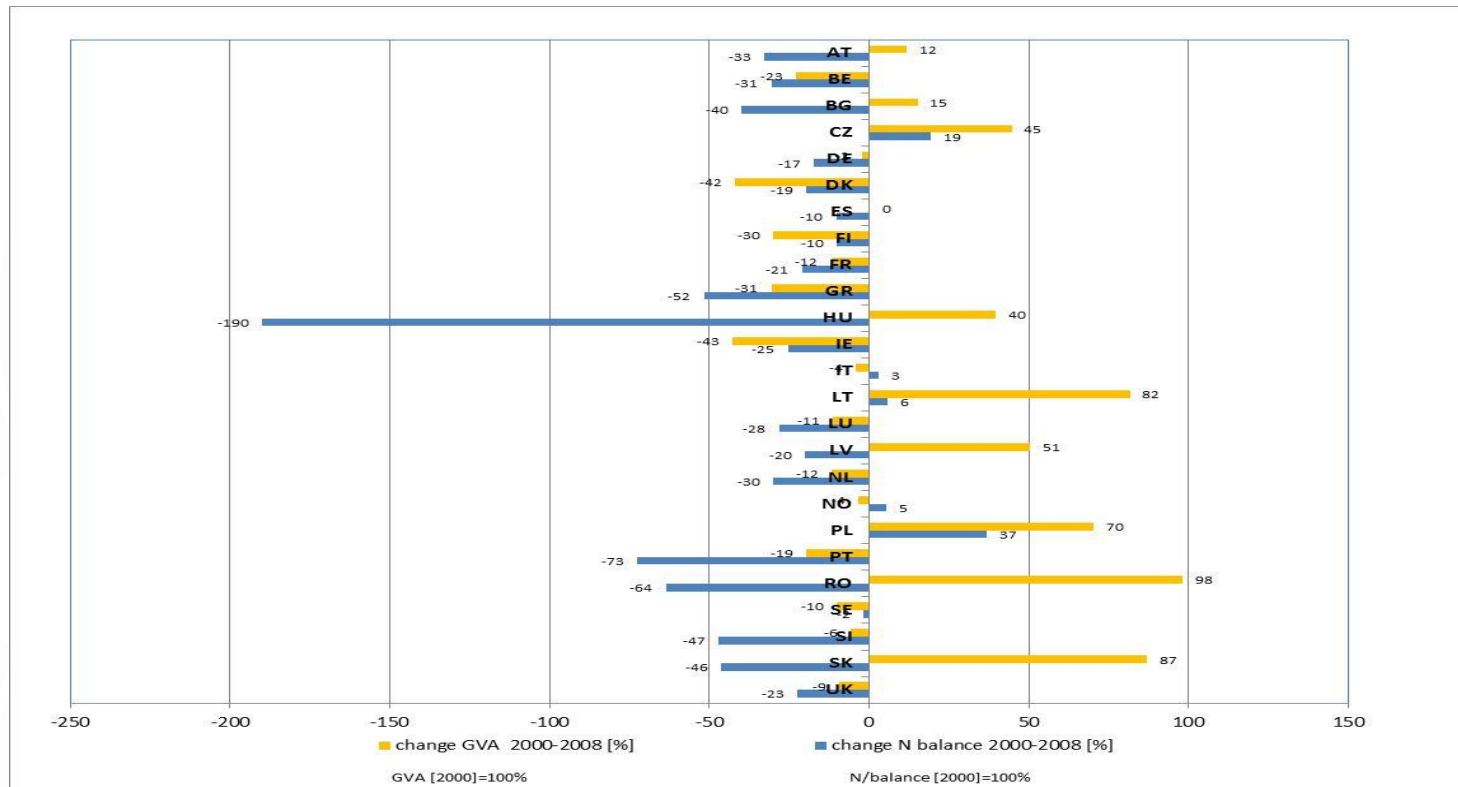
- Water Productivity (€/m³) in agriculture, forestry and fishing (Nace A) in EU countries, depicting the economic activity (GVA of Nace A/capita) and the resource use (total annual water abstraction for Nace A/capita), ranked from high to low productivity
- Data source: Eurostat



Emission intensity- agriculture

Changes in Nitrogen balance and GVA of agriculture in Europe 2000-2008 (EU-24 +Norway)

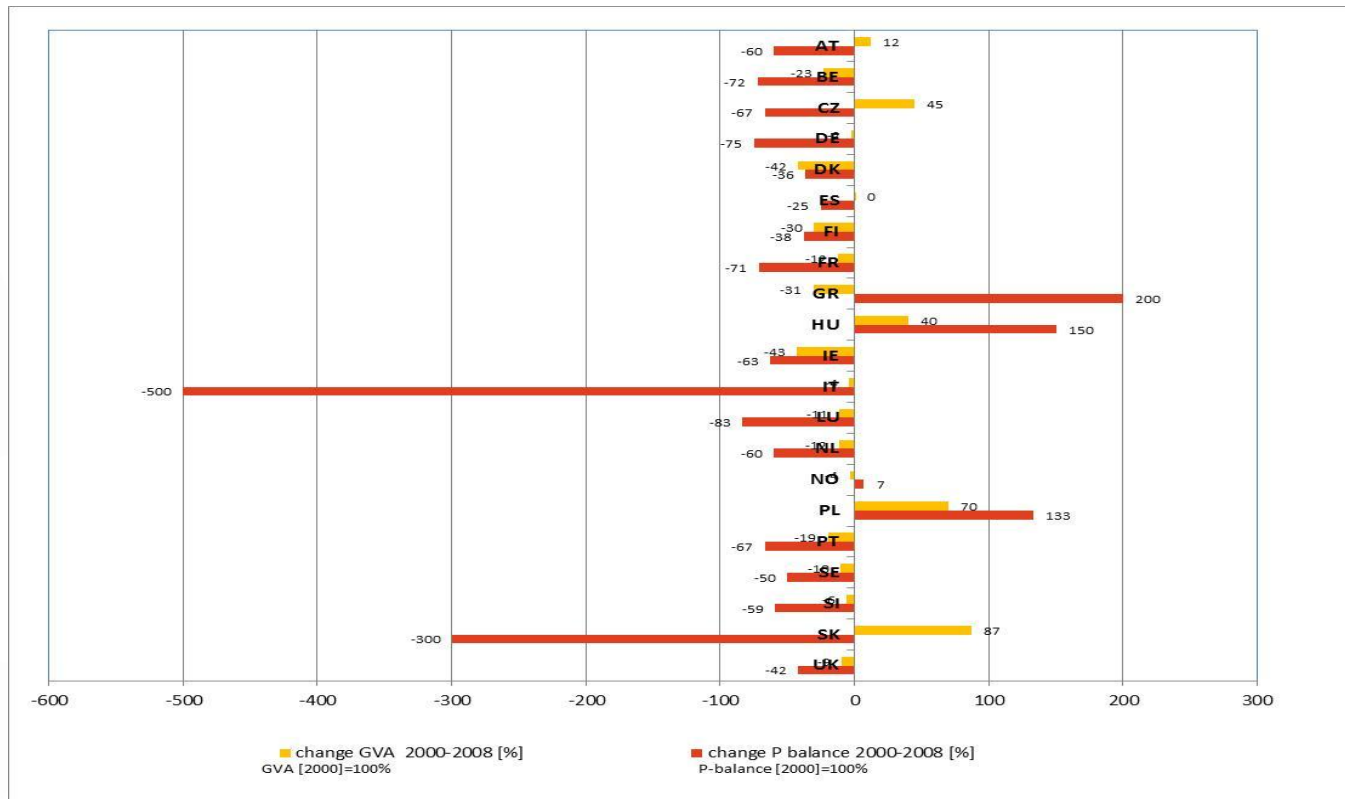
Data source: Eurostat



Emission intensity- agriculture

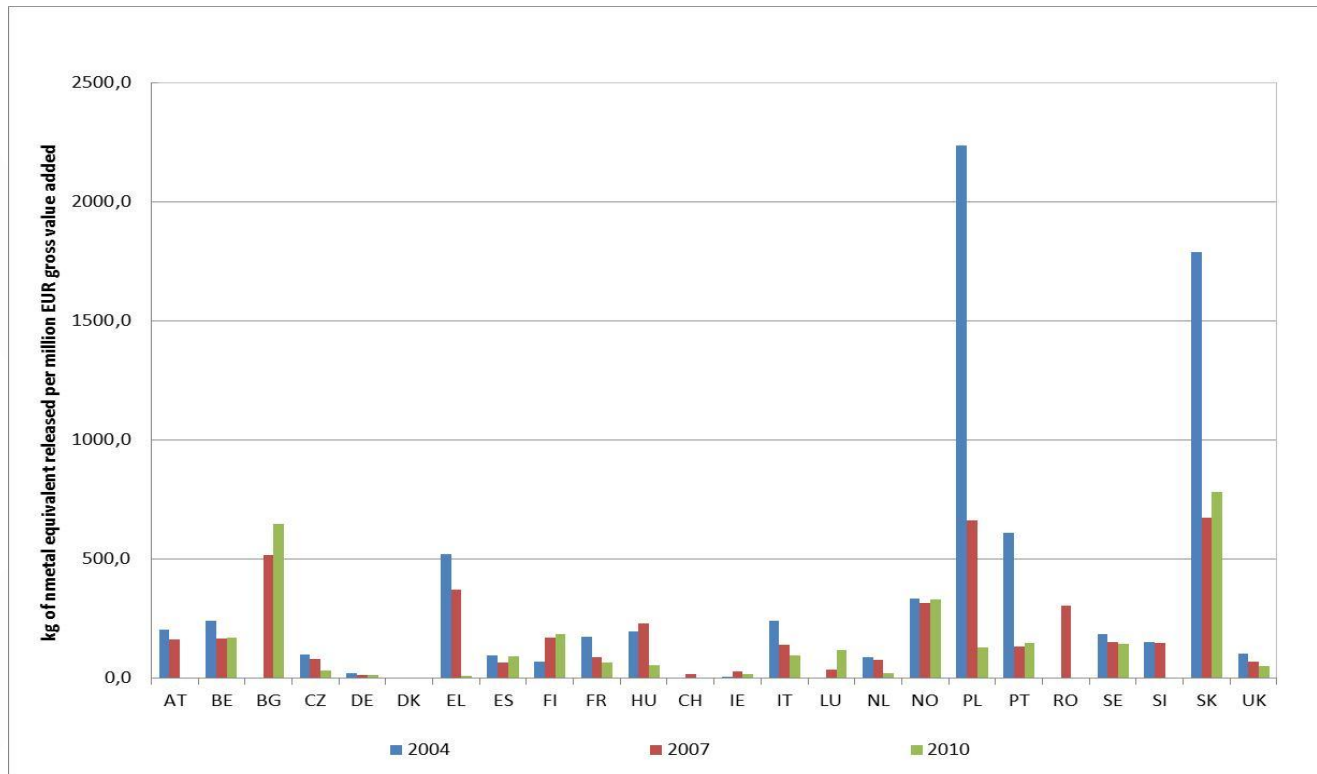
Changes in Phosphorus balance and GVA of agriculture in Europe 2000-2008 (EU-21 +Norway)

Data source: Eurostat



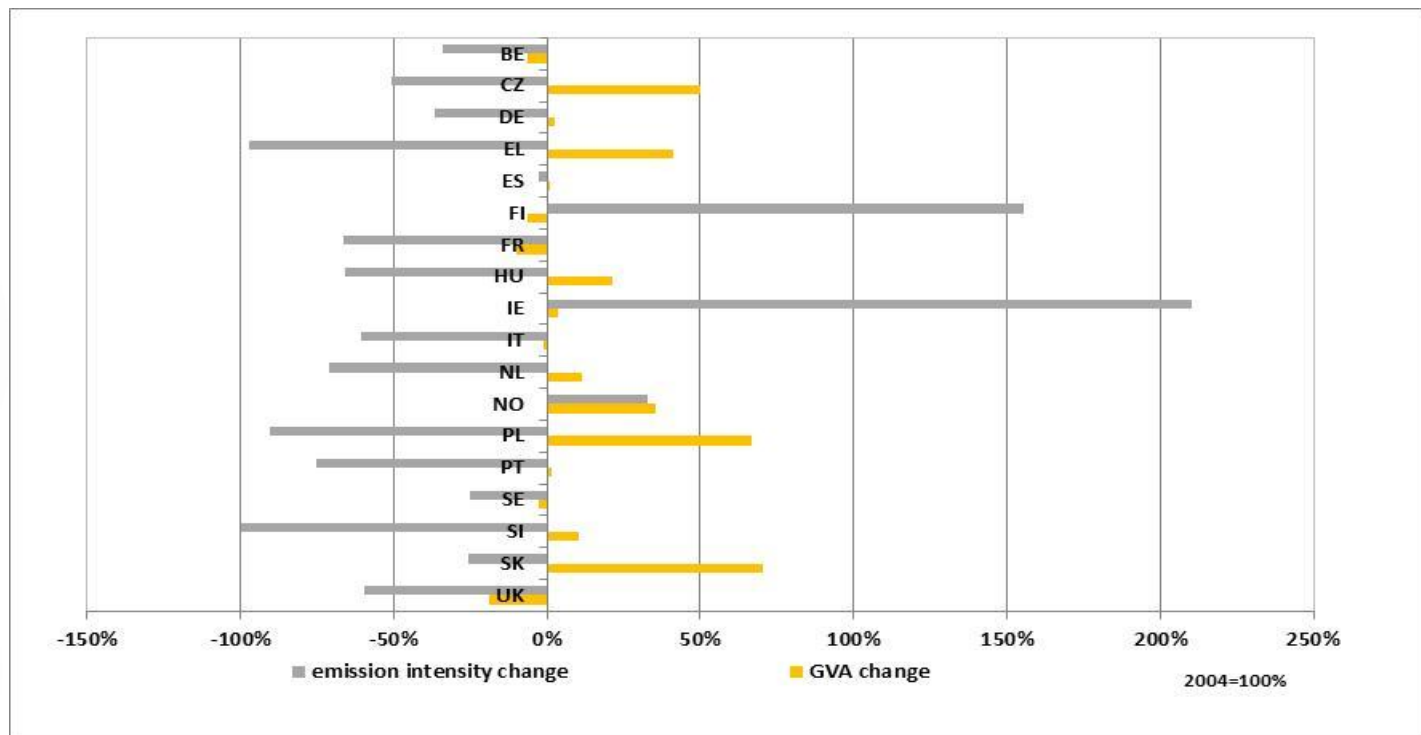
Emission intensity -industry

- Heavy metal emission intensity of manufacturing industries in Europe 2004-2010 (EU 22+Norway and Switzerland)
- Data source: E-PRTR, Eurostat



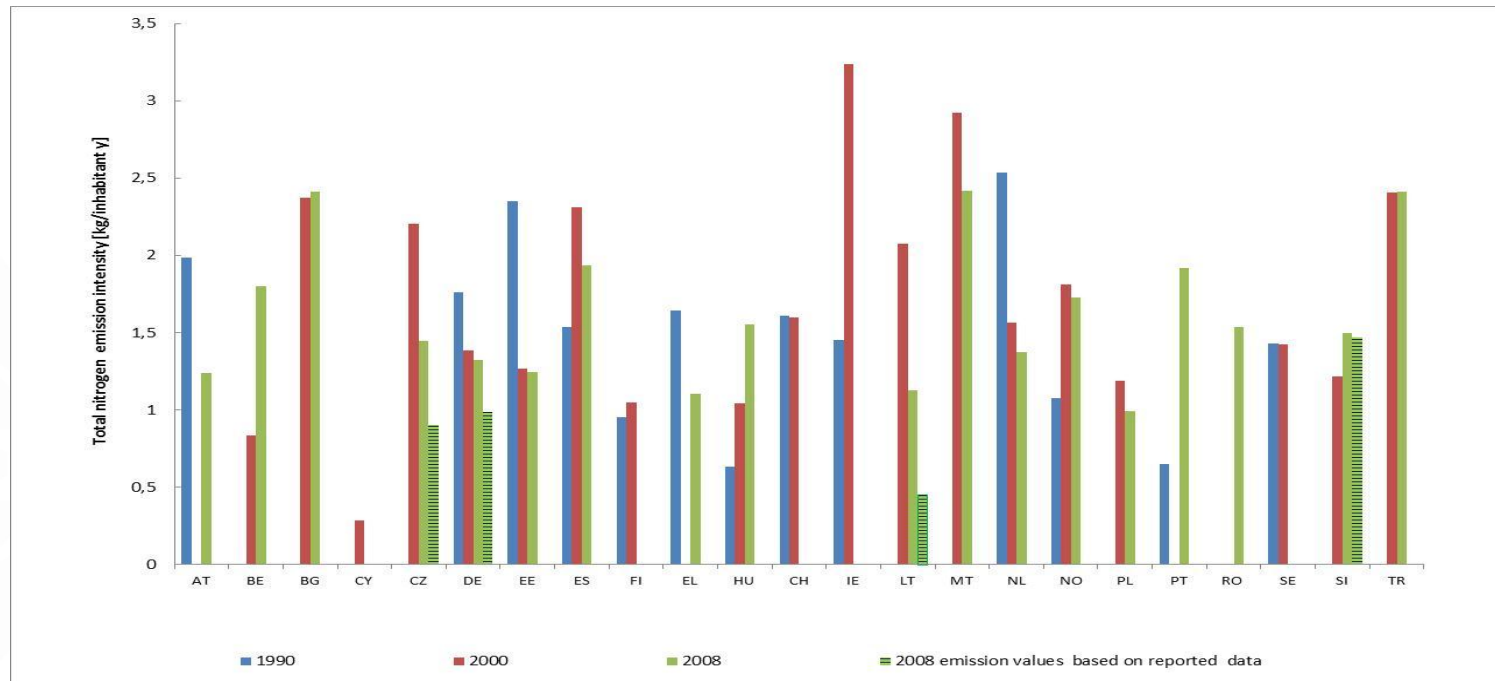
Emission intensity -industry

- Decoupling of heavy metal emissions from gross value added in industries in Europe between 2004 and 2010.
- Data source: E-PRTR, Eurostat



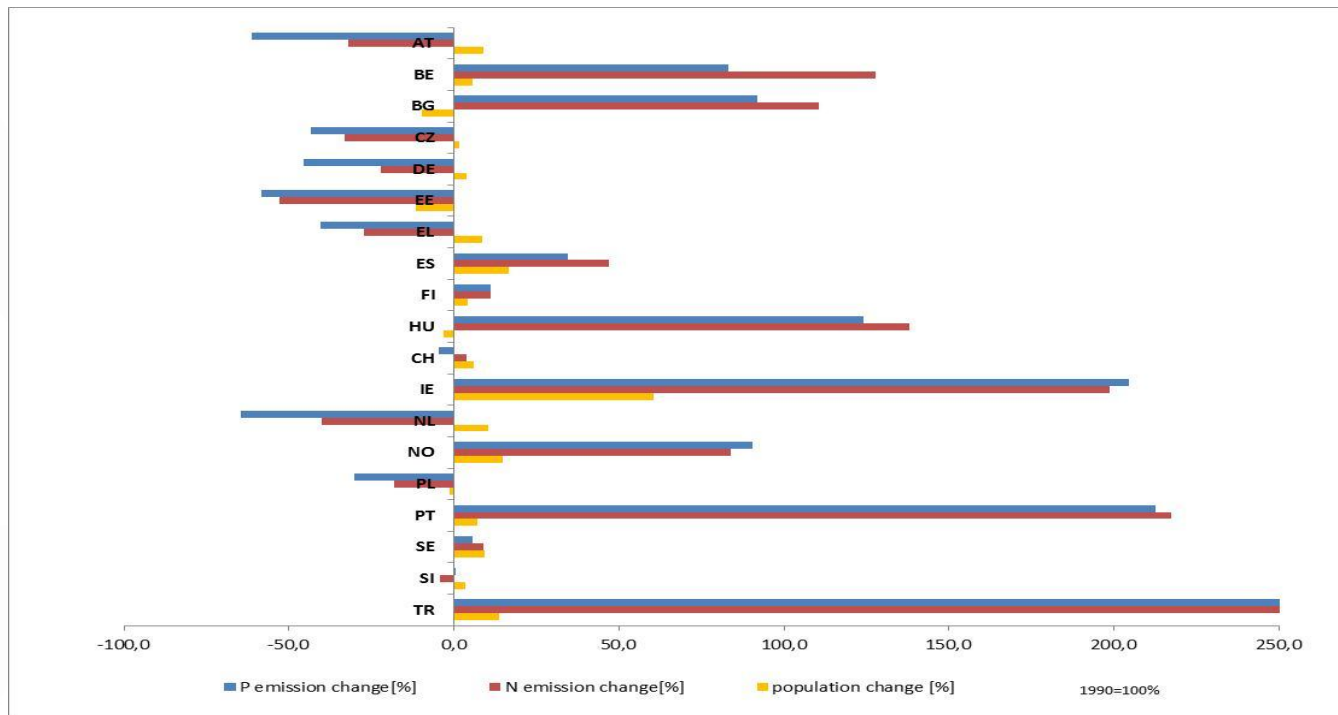
Emission intensity - household

- Nitrogen emission intensity of household sector in period 1990, 2000, 2008 in 23 European countries
- Data source : Eurostat, UWWTD DB



Emission intensity - household

- Decoupling of nutrient emissions from population growth in household sector in Europe between 1990 and 2008.
- Data source: Eurostat



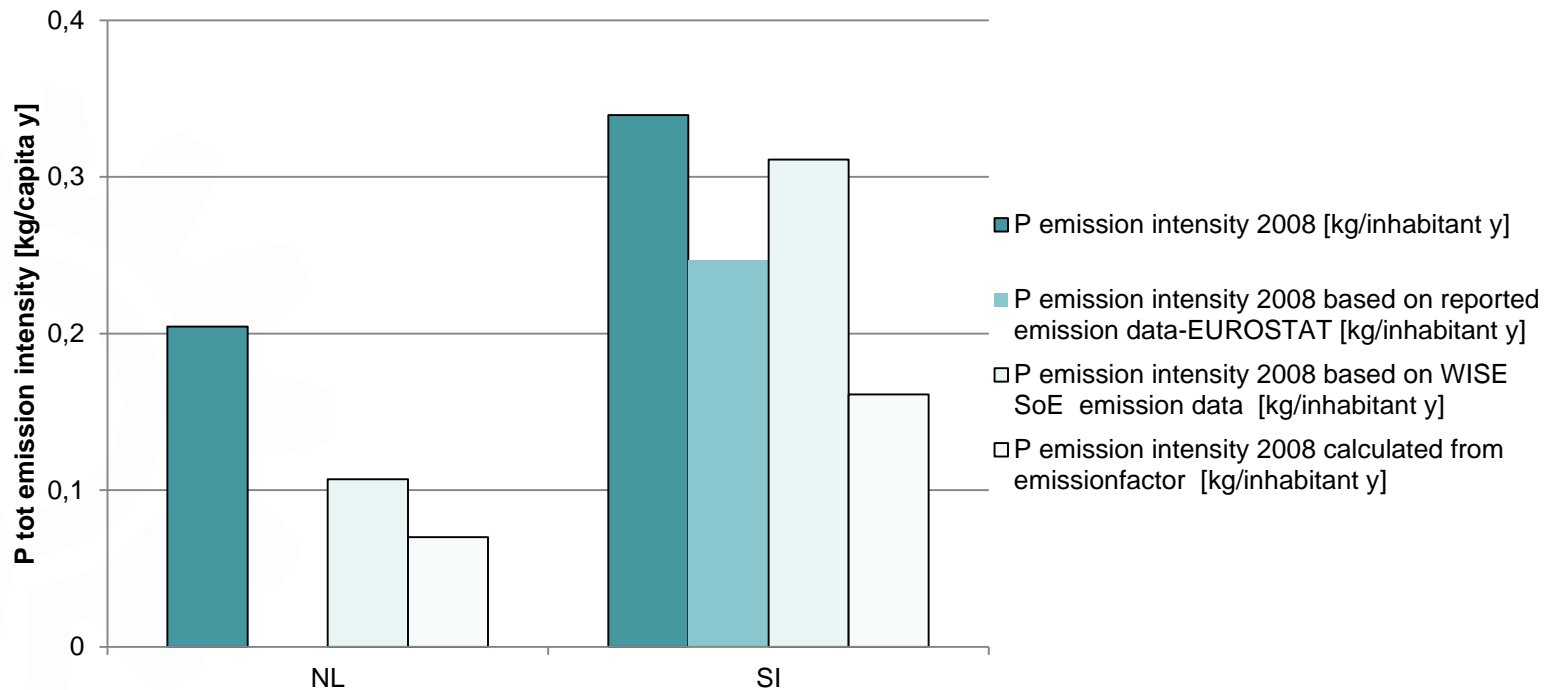
Emission intensity - household

Shortcomings

- Current values reflect the infrastructure in place, not the actual performance (based on discharged load)
 - Possible solution:
 - use of the data reported under the UWWTD
 - Calculation of „emission factors per treatment type “ based on the reported data analysis
- Or
- Use of the data from alternative sources (e.g. data from utilities)

Emission intensity - household

- Comparison of emission intensity calculated from different data sources



Emission intensity – household (way forward)

- Data improvement
 - Data on emission loads (N, P)- wider coverage within EU
 - Info on the share of load from industry treated in UWWTPs
- Knowledge exchange
 - information on specific policies (Ms specific, or RBD specific) that may have impact on the emission loads (e.g ban of specific detergents, nutrients recovery, etc.)