The Nitrates Directive Implementation

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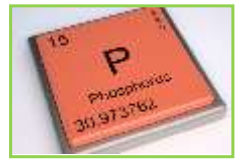
Presentation outline

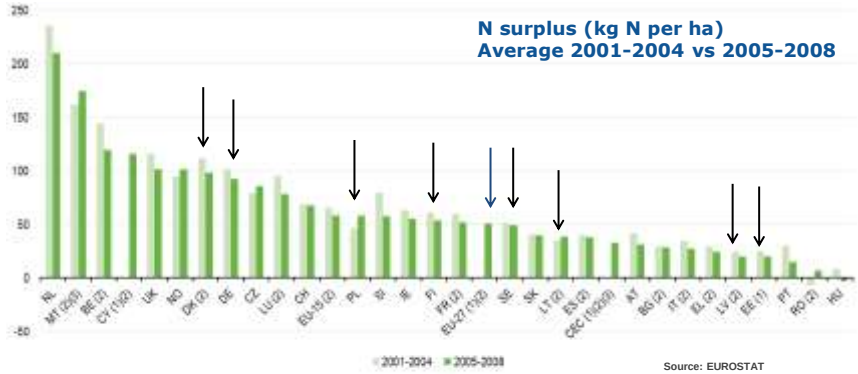
- **NUTRIENTS CHALLENGES**
  N surplus and P concentration, Nutrients inputs in the Baltic
- **EU POLICIES AND LEGISLATION**
  WFD, UWWTD, MSFD and others
- **FOCUS ON THE NITRATES DIRECTIVE**
  How it works, successes and challenges

Nutrients

- Important natural resource, essential to agriculture and life
- Phosphorus is an irreplaceable, limited natural resource
- Inefficient use and losses to environment can impact water, soil, air, ecosystems and biodiversity, etc.
- Eutrophication is one of the key threats to reach "good ecological status" for EU surface waters

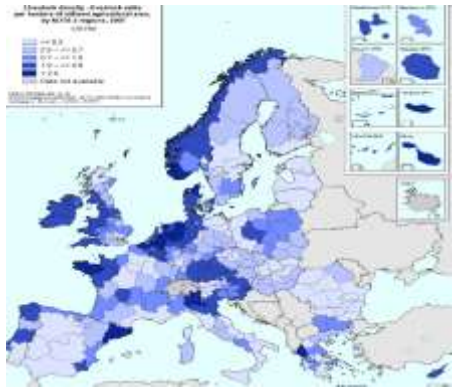


Nitrogen surplus in EU27

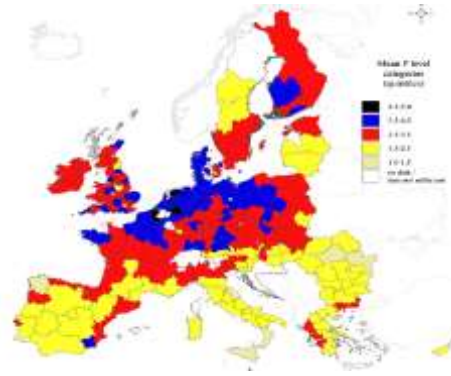


(1) Data not available for 2001-2004
(2) Eurostat estimations
(3) PL, RO, BG, CZ, HU, LV, LT, EE, SI, SK
(4) Average 2002-2004

Livestock density vs Phosphorus concentration



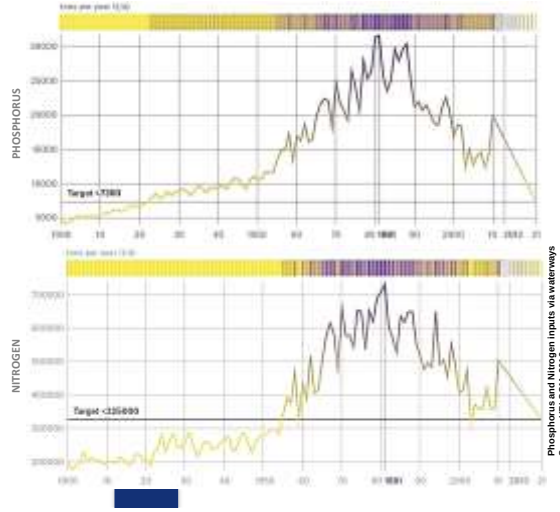
Source: Eurostat



Source: LUCAS survey, JRC

Baltic Sea P & N inputs

- **Increase in N and P inputs during the 1950s – 60s connected, among other factors to increased application of mineral fertilisers and growth in agricultural production.**
- **Improved wastewater treatment and fertilizers management contributed diminishing nutrients inputs after the 1980s peak.**



Phosphorus and Nitrogen inputs via waterways
Source: HELCOM, 2013

Water legislation relevant to nutrients

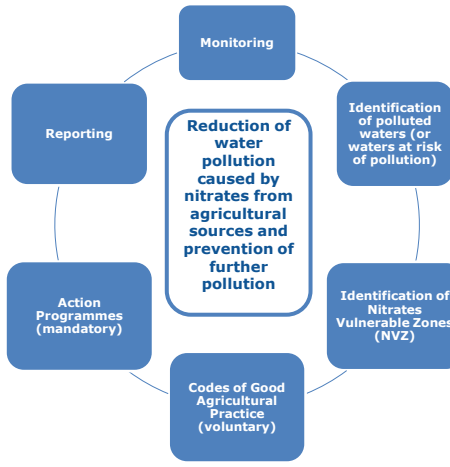
Water Framework Directive (2000/60/EC)	Urban Waste Water Treatment Directive (91/271/EEC)	Marine Strategy Framework Directive (2008/56/EC)	Nitrates Directive (91/676/EEC)
•**'Framework Directive'** bringing together EU water policies •**Aim:** Achieve good status of EU waters by means of integrated RBM •**Instrument:** RBMP and Programme of Measures → integrated approach based on identified pressures	•**Aim:** Protect environment from the adverse effects of waste water discharges •**Instrument:** Establishment of proper collection systems for waste water; Ensure appropriate treatment of collected waste water; Ensure reinforced treatment in areas sensitive to eutrophication	•**Aim:** Achieve Good Environmental Status (GES) for marine waters by 2020 by means of coherent approaches across sea basins •**Instrument:** Marine strategies and programmes of measures based on identified pressures	•**Aim:** Reduce water pollution caused by nitrates from agricultural sources and prevent further such pollution •Instrument: Codes of Good Agricultural Practices, designation of vulnerable areas, Action Programmes




Other relevant legislation

Overall impact of intensive livestock rearing:	•Prevention and control of industrial emissions: Directive on industrial emissions 2010/75/EU (IED)/IPPC (pig and poultry)
Air emission from livestock manure:	•National emission ceilings in place for 2010 in the NEC Directive (2001/81/EC) (now under revision) •Air Quality Directive (2008/50/EC) (PM)
Rules for placing livestock manure and/or processed products on the market:	•The Animal By-products Regulation (1069/2009/EU) supplemented with Regulation (142/2011/EU) •Fertilizers regulation

Nitrates Directive (91/676/EEC)



Monitoring

1. Total number of reported **surface water monitoring stations** in EU-27 **increased by around 9%**.
2. Total number of reported **groundwater monitoring stations** in EU-27 has **increased by around 10%**.
3. The average density of the network in the EU is 6,9 (surface water) and 8 (groundwater) stations per 1 000 km^2 of land area.

Freshwater and groundwater monitoring stations 2008-2011

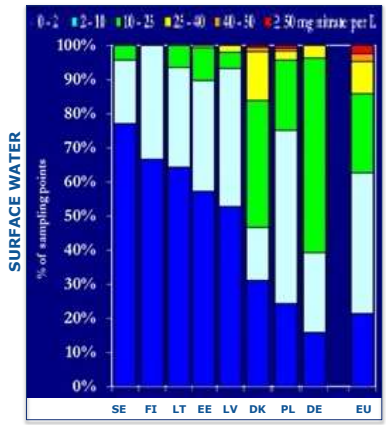
Member State	Freshwater stations with measurements	Groundwater stations with measurements	Freshwater stations density per 1000 km²	Groundwater stations density per 1000 km²
DE-Germany	300	162	0.9	0.5
DK-Denmark	161	595	3.8	14.0
EE-Estonia	145	299	3.4	7.1
FI-Finland	141	79	0.5	0.3
LT-Lithuania	291	62	4.6	1.0
LV-Latvia	339	174	5.4	2.8
PL-Poland	2801	1258	9.2	4.1
SE-Sweden	2455	326	6.0	0.8
EU	29018	33493	6.9	8.0

Number and density of reported freshwater and groundwater monitoring stations. Figures in the table are taken from the datasets submitted by the Member States. Only stations for which complete and correct information (on ID, coordinates, etc.) has been reported are included.

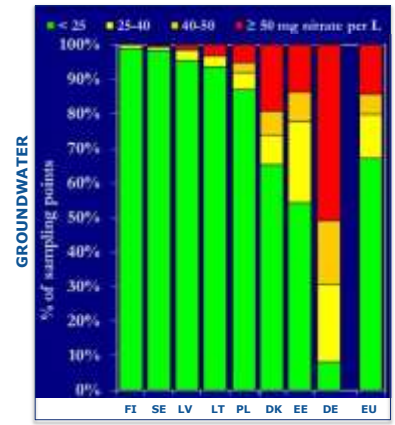
Identification of polluted waters

1. **Surface freshwaters**, in particular those used or intended for the abstraction of drinking water, which contain or could contain > 50 mg/l nitrates, if no action is taken.
2. **Groundwaters** which contain > 50 mg/l nitrates or could contain > 50 mg/l nitrates if no action is taken.
3. **Natural freshwater lakes**, other freshwater bodies, estuaries, coastal waters and marine waters which are found to be **eutrophic** or in the near future may become eutrophic if no action is taken.

Baltic - Surface and groundwater nitrates concentration



2008-2011 reporting period - Frequency diagram of surface water classes (Annual average nitrate concentrations).



2008-2011 reporting period - Frequency diagram of groundwater classes (Annual average nitrate concentrations). Results are presented for all groundwater stations at different depths.

NVZ designation

Land draining into polluted waters or waters at risk of pollution designated as NVZ Art.3(1) and Art.3(2)

Alternatively, MS can take the "whole territory approach" (establishment of obligatory measures for the entire territory) Art, 3(5)

Action Programmes

Measures referred to in Annexes II and III to the Directive

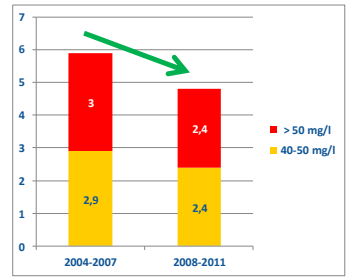
- **Periods** when fertilizer application is prohibited
- Min. requirements for capacity and construction of **storage** facilities
- **Limitation** of land application of fertilizer (balanced fertilization)
- Max. application standard of **170 Kg N/ha/year** from livestock manure
- Application on **water-saturated, flooded, frozen** or **snow-covered** ground
- Buffer strips near **water courses**
- Application of fertilizer on **steeply sloping ground**

Reporting requirements

Article 10 of the Nitrates Directive. Every four years, reports from MS containing information on: CGAP, NVZ, results of water monitoring, and a summary of AP.

Surface water - Period 2008-2011

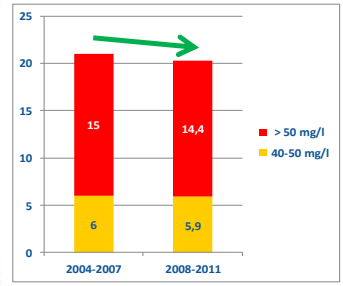
% of surface water stations exceeding 40 and 50 mg/l nitrates



Source: data from the 2008-2011 report on the implementation of the Nitrates Directive http://ec.europa.eu/environment/water/water-nitrates/reports.html

Groundwater - Period 2008-2011

% of groundwater stations exceeding 40 and 50 mg/l nitrates



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Conclusions

- **Nitrates Directive: a piece of an integrated policy towards protection of water quality and environment**
- **Nitrates Directive: successful policy approach → water quality improvement**
- **Improvements of nutrient management related practices (manure storage, phase feeding to match animal N needs and reduce excretion, better application timing and advanced spreading techniques)**
- **Co-benefits in relation to other policies/issues (Phosphorus management, Ammonia emissions, etc.)**
- **Challenges still remain (hot spots of pollution, eutrophication, controls, etc.)**

THANK YOU!

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For more information visit:
ec.europa.eu/environment/water/water-nitrates