European lakes and the EU Water Framework Directive

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EU Water Framework Directive

WFD came into force in 2000

- Unified a number of earlier directives
- Adopts a holistic, integrated approach: incorporates water, land, atmosphere, biosphere
- Strives for harmonization of policy within the EU
- Based on integrated river basin management & public participation in decision-making

Ultimately aims to achieve that all water bodies (rivers, lakes, transitional and coastal waters) have a “good” status, in terms of biological & chemical criteria

Each River Basin District has to develop River Basin Management Plans (RBMPs) with a concrete Programme of Measures, to achieve “good” status by 2015

The first RBMPs were formulated by 2009, when implementation had to start

Every 6 years the outcomes are evaluated and the plans updated and revised

Achievements

During the first WFD cycle (2009-2015) the number of surface water bodies in “good” state only increased by 10%

Many RBDs have asked the EC to allow them to postpone achieving a “good” status for all water bodies until the end of the third cycle (i.e. by 2027), including The Netherlands...

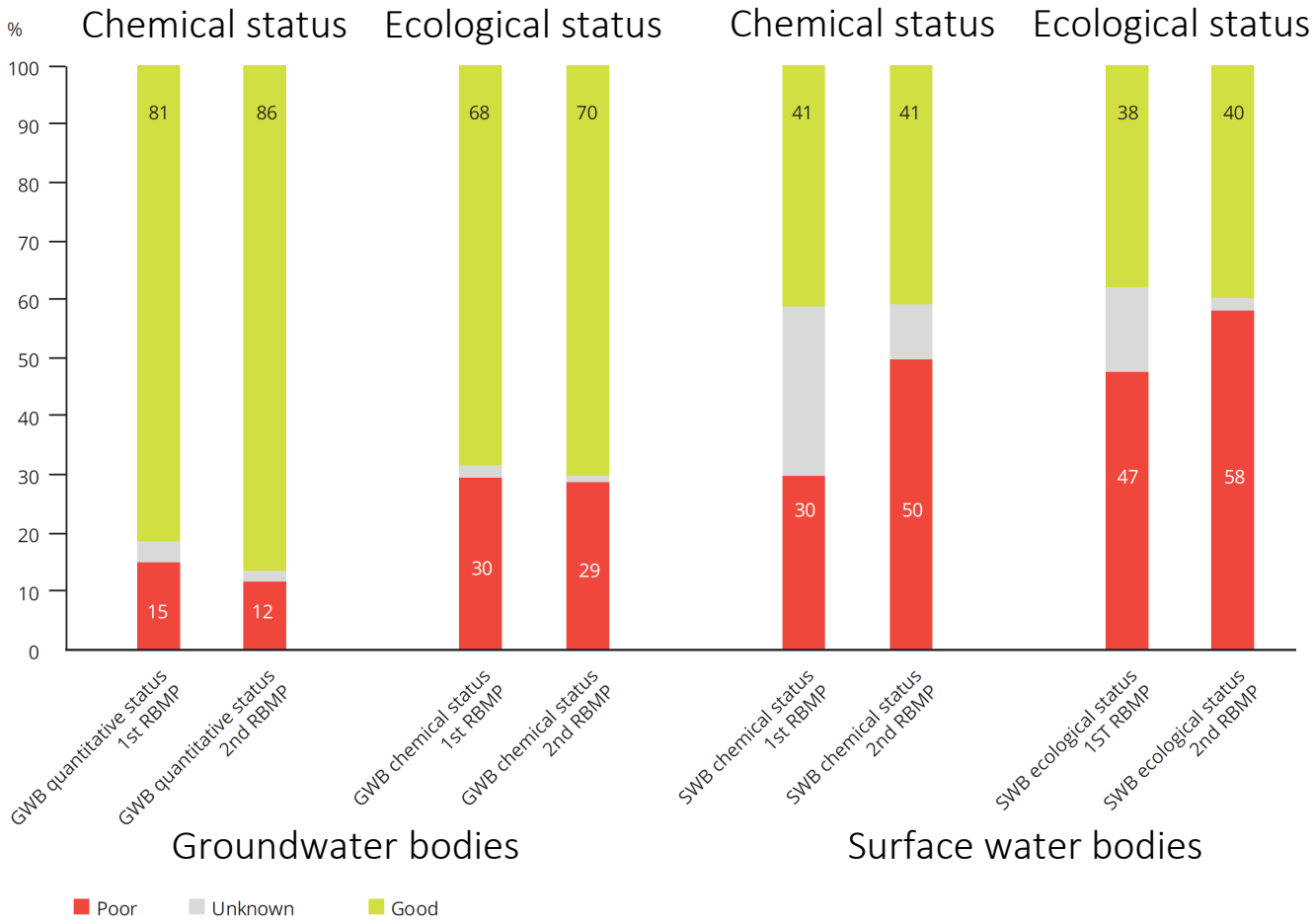
Achievements

Change between 2009 and 2015…

"Overall, the second RBMPs show limited change in status, as most water bodies have the same status in both cycles." (EEA, 2018)

Implying limited progress

Figure 6.1 Comparison of status (quantitative, chemical and ecological) in the first and second RBMPs

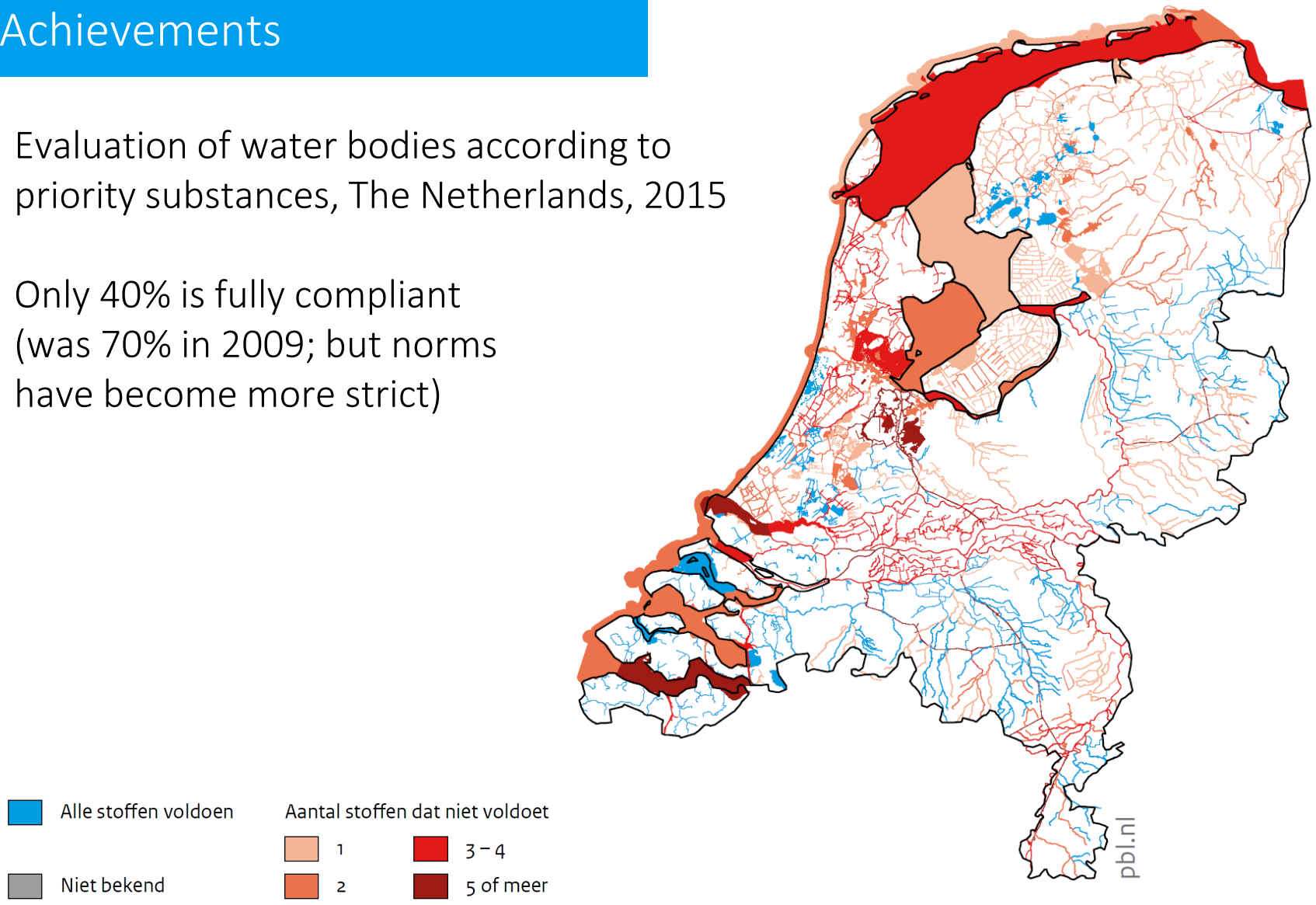


Source: EEA, 2018

Achievements

Evaluation of water bodies according to priority substances, The Netherlands, 2015

Only 40% is fully compliant (was 70% in 2009; but norms have become more strict)



Source: PBL, 2016

Challenges

WFD: peculiar balance between

- flexibility for Member States, and
- enforceable and binding obligations by the EC

Member states can establish their own reference sites, assessment methods.

As a result there are said to be :

- >100 different national assessment methods for lakes across Europe
- >600 different national lake types

The reporting entities are the member states, not the RBDs –

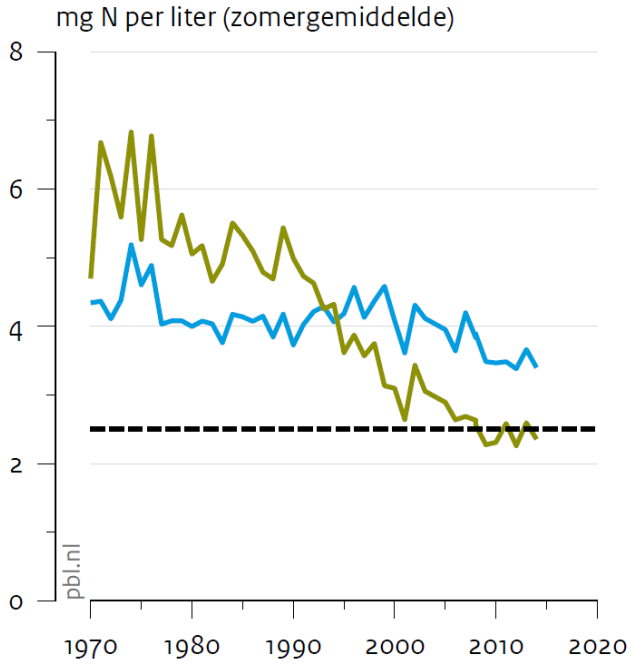
- in some transboundary basins, the WFD has *reduced* collective action between riparians, because member states report individually to EU.

Challenges

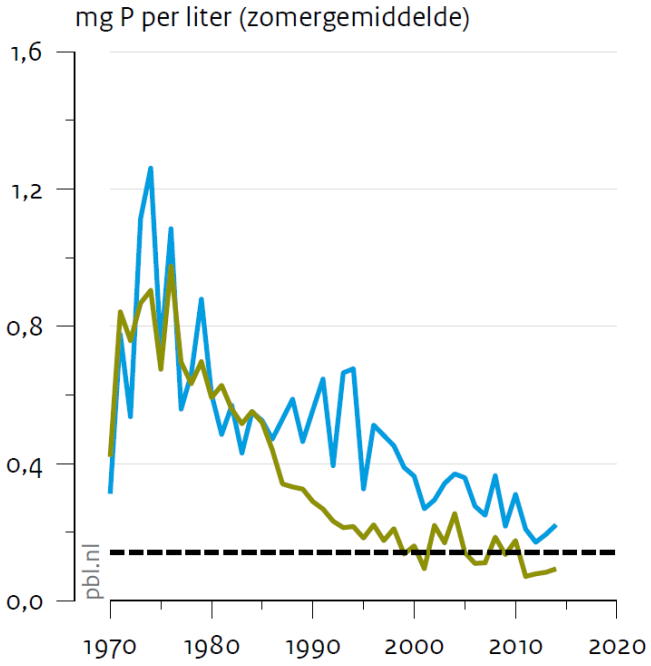
The transboundary dimension: N and P concentrations

- Meuse at the border between Belgium and The Netherlands (blue)
- Rhine at the border between Germany and The Netherlands (green)

Nitrogen



Phosphorus



Source: PBL, 2016

Challenges

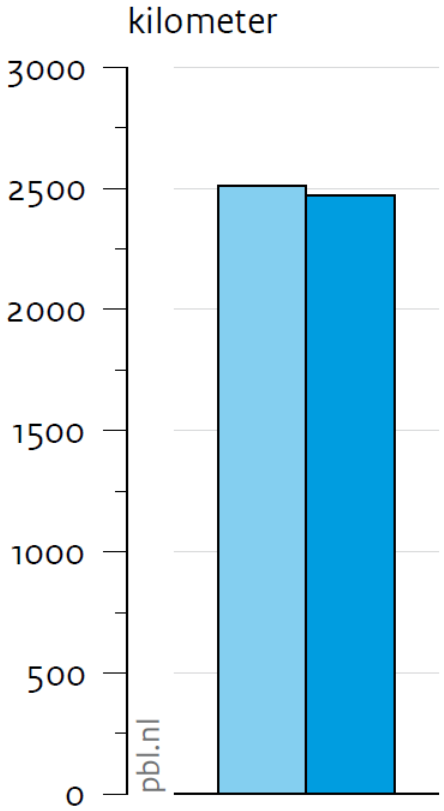
Apart from the strong focus on chemical substances, sufficient attention must be paid to hydro-morphology, hydrological alteration and physical barriers (dams, dykes, locks etc.), to ensure sufficient connectivity and dynamism between rivers and lakes

Challenges

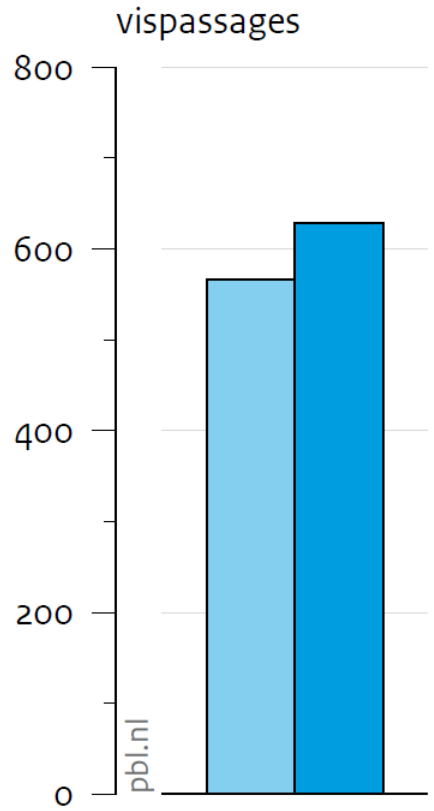
Importance of addressing hydro-morphological constraints and barriers in The Netherlands

planned (light blue) and implemented (dark blue), 2009-2015

Hydro-morphology: construction of nature-friendly river-shores and re-meandering of rivers



Construction of fish-passages



Source: PBL, 2016

Challenges

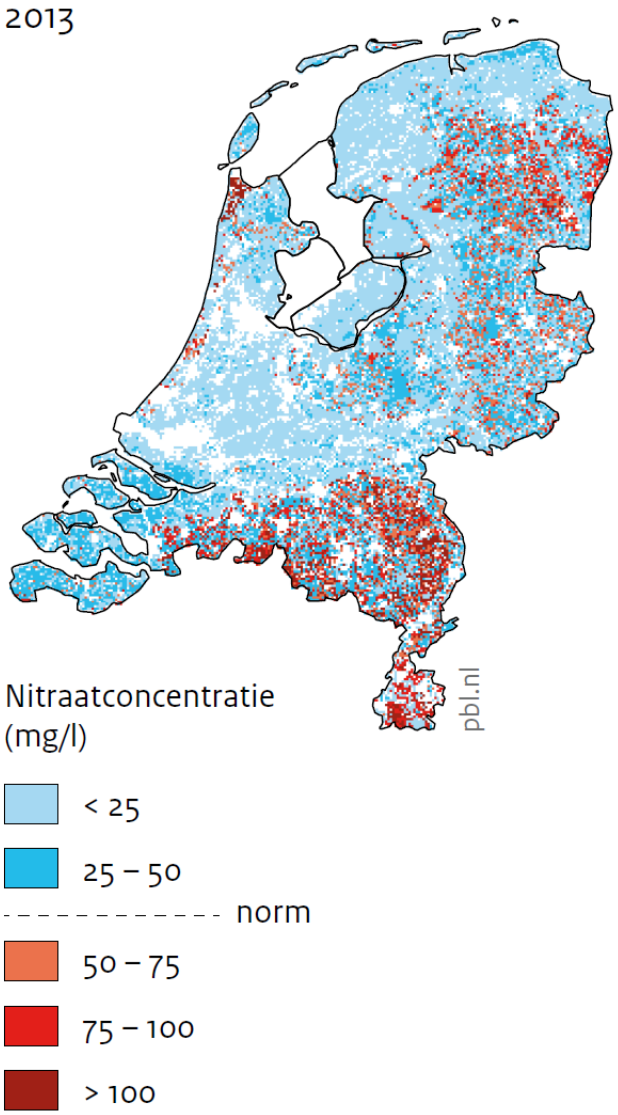
In The Netherlands, a significant further improvements of the “good” status of water bodies will require substantial more efforts and sacrifices by the agricultural sector (significantly reducing N and P loadings).

Politically, this, however, seems an unlikely scenario….

- … unless the entire agricultural sector in The Netherlands will fully and radically transition into a sustainable circular system

Challenges

Nitrate concentration in shallow groundwater, The Netherlands

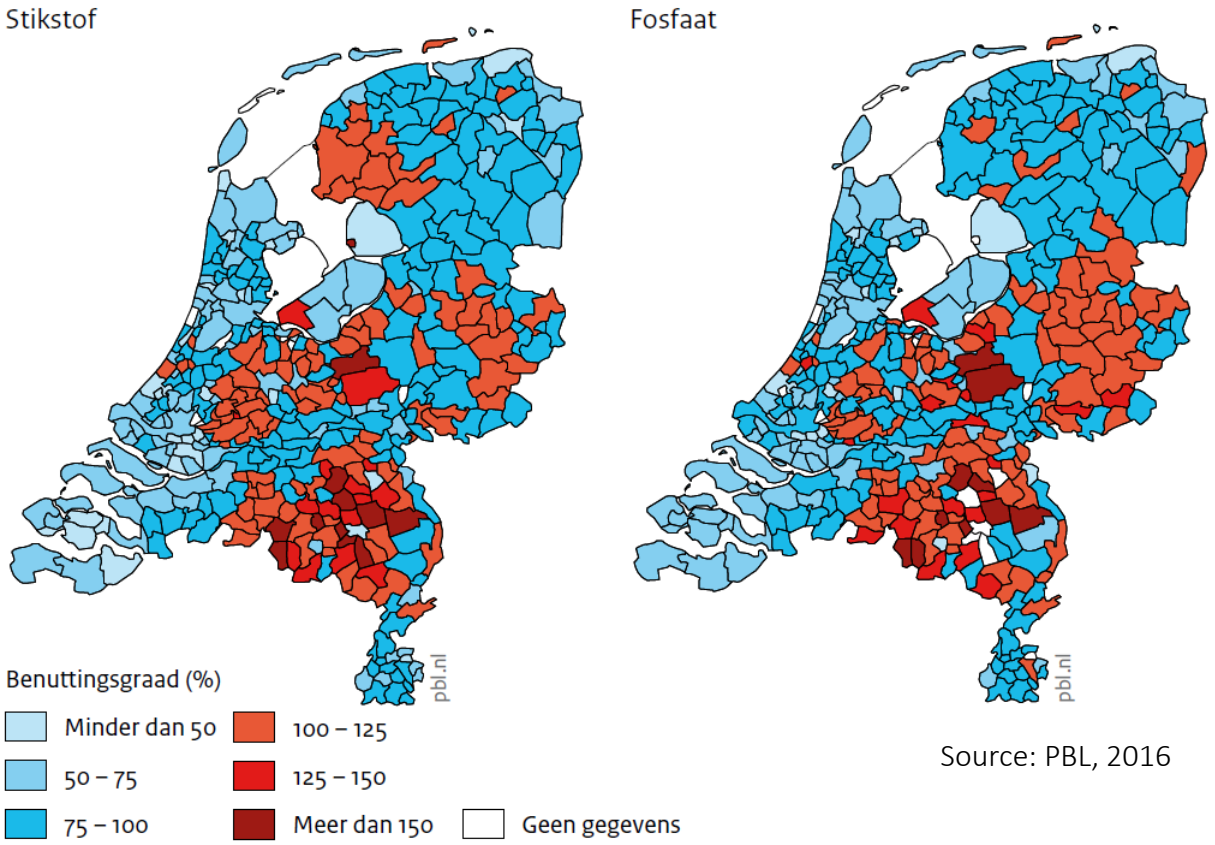


Source: PBL, 2016

Challenges

In The Netherlands, many farmers still apply more N and P than their crops consume (in orange and red), data for 2013.

Whereas this is illegal, the authorities do not manage to enforce the rules

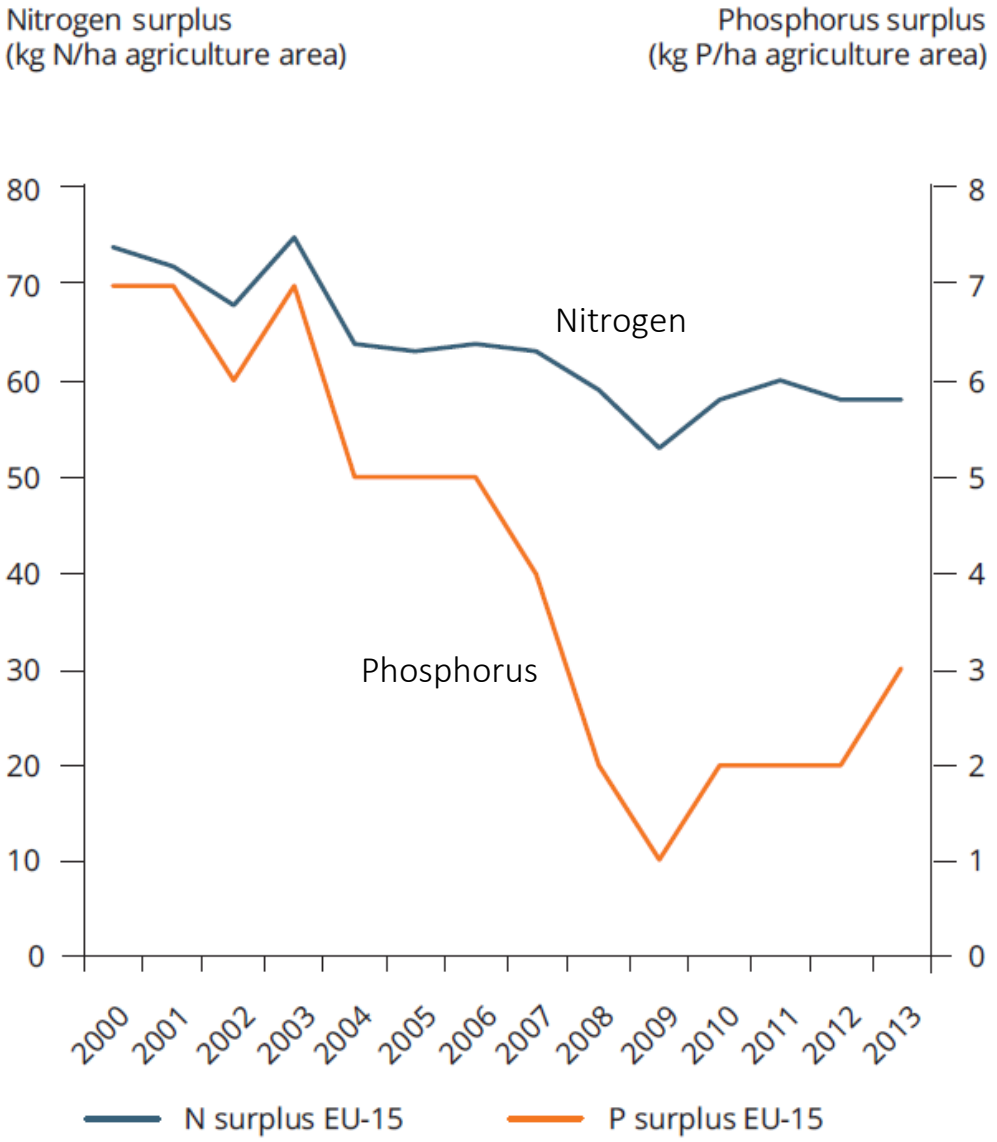


Source: PBL, 2016

Challenges

For the EU-15: the same

No positive change since 2009



Source: EEA, 2018

Conclusions

- WFD has so far had limited impact on improving the water bodies in the EU to good status; progress is very slow
- The counter-factual is, however, not known
- In the mean time, more data and knowledge is being generated
- Public participation in decision-making does not seem to be increasing
- WFD has not stimulated intensified collaboration over transboundary water bodies
- Integration/synchronisation of various policy measures and instruments affecting water bodies is definitely needed…
- … but appears extremely difficult / time consuming
- … and farming lobbies remain strong

Thank you!

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