



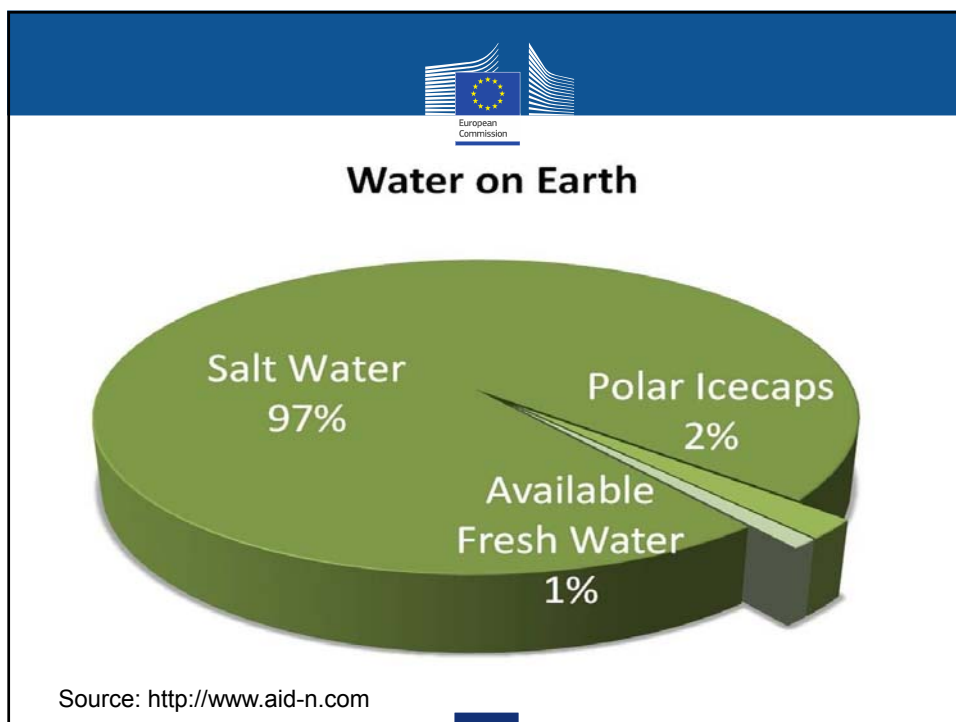


**EU Groundwater Directive
2006/118/EC**
on the protection of groundwater
against pollution and deterioration

Water safety and security workshop
Brussels, 12 December 2016

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(presented by Joaquim Capitào)

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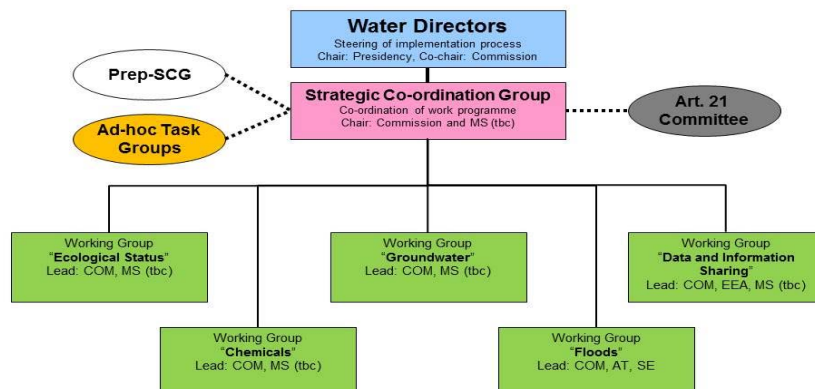


- **Important aspects to keep in mind (1/2)**
 - Focus until recently:
drinking water (75% of EU residents depend on GW).
 - Now expanded to:
other uses (industry, agriculture), environmental value,
dependent ecosystems...
 - GW deterioration
can directly affect rivers, protected areas...

- **Important aspects to keep in mind (2/2)**

- Slow flows and recovery rates:
anthropogenic pressures might last for a long time - decades or more.
- "Hidden resource":
pollution prevention, monitoring and restoration can be more difficult than in surface waters.
- Lack of awareness:
Among technicians, citizens, politicians

CIS Organisation 2016-2018



Slide 6

LC(1) is there a newer version of this organigramm, where the MS are filled in for the WGs?
LEITNER Christoph (ENV-EXT), 06/12/2016



- **Water Framework Directive (WFD) Article 17:**

Specific measures to prevent and control groundwater pollution aimed at achieving the objective of good groundwater chemical status in accordance with Article 4(1)(b) → Groundwater Directive 2006/118/EC (GWD)

- **WFD and GWD should be read together:**

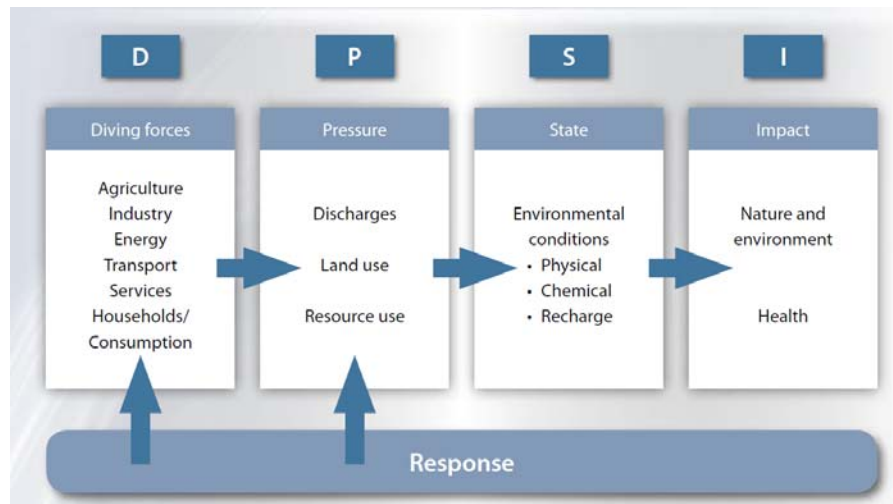
- **Definitions:** Art. 2 WFD
- **Objectives:** Art. 4 WFD
- **Characterization:** Art. 5 and Annex II WFD
- **Drinking water abstraction:** Art. 7 WFD
- **Monitoring:** Art. 8 and Annex V WFD
- **Measures:** Art 11 WFD
- GWD focusses on chemical status and trend assessment



- **WFD environmental objectives**

- **No deterioration of status** for surface and **groundwater**
- **Achievement of good status by 2015**
And later for priority substances added in 2013
- **Surface waters:**
 - Progressive reduction of pollution by priority substances
 - Phase-out of emissions of priority hazardous substances to water
- **Groundwater:**
 - Prevention and limitation of input of pollutants
 - Reversal of any significant, upward trend of pollutants (trend studies baseline: 2007-2008)

Achievement of standards and objectives set for WFD protected areas in Community legislation (e.g. conservation of habitats and species)



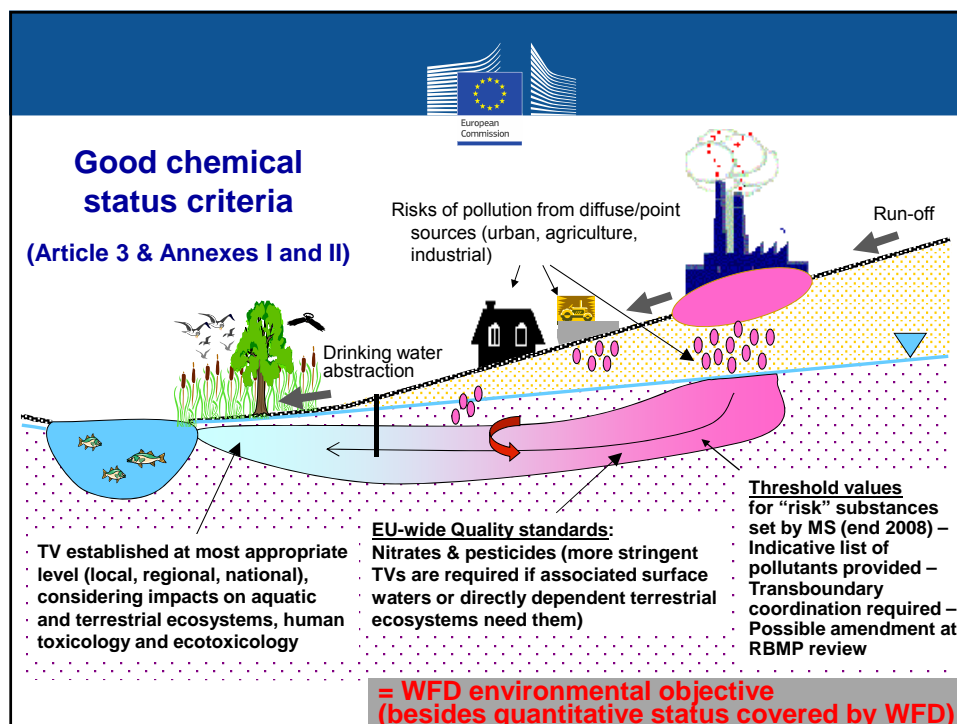
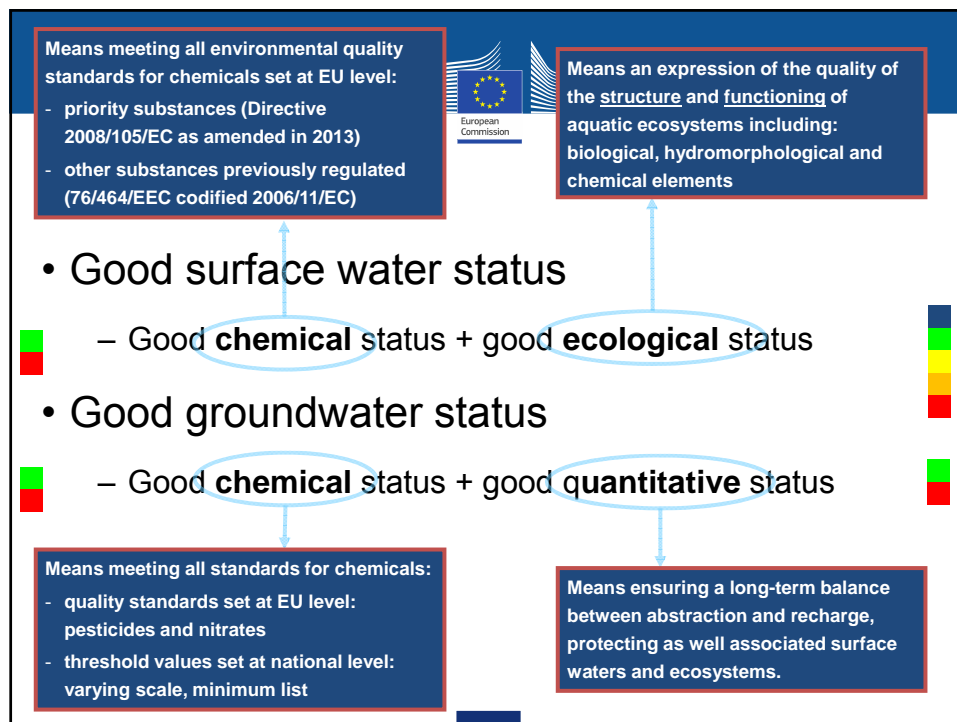
- **Monitoring**

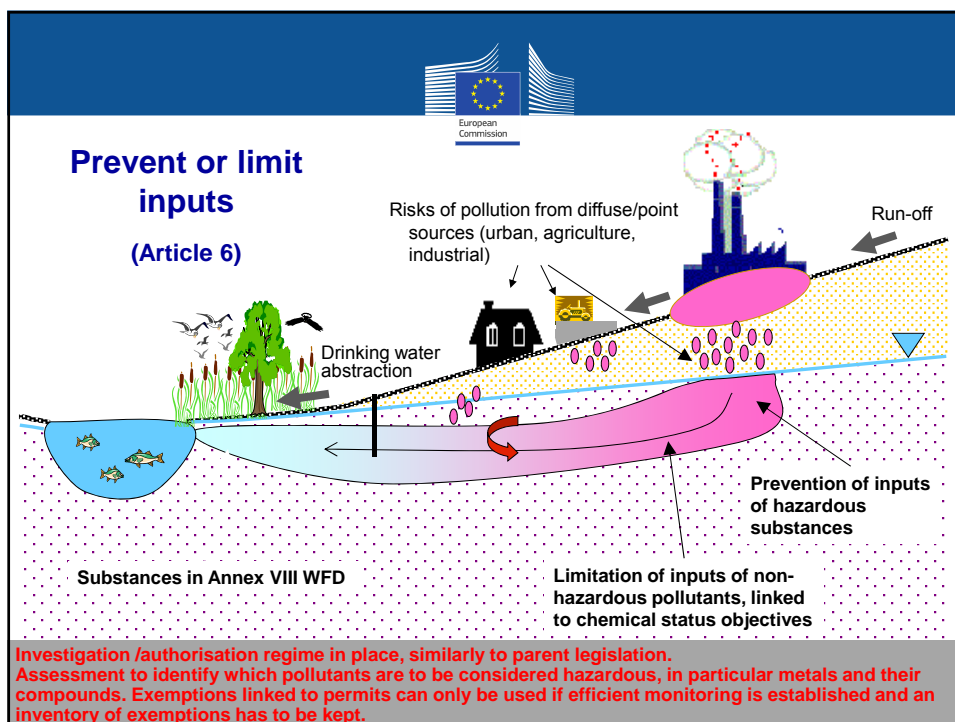
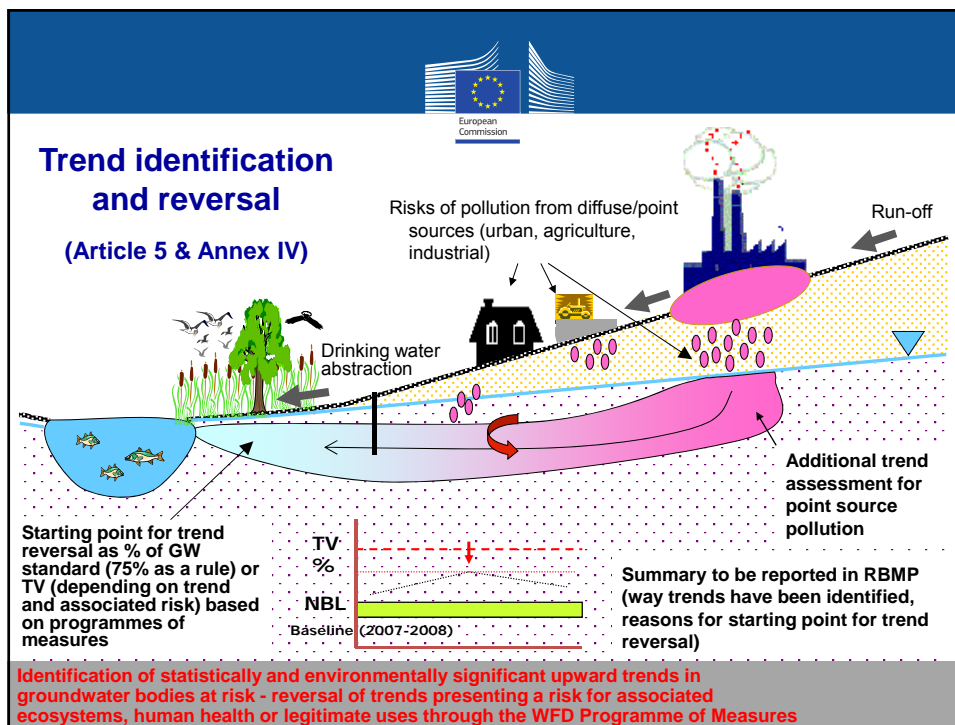
- **Quantitative:**

- Groundwater level

- **Chemical:**

- Surveillance monitoring:
validate impact assessment and info on trends.
5 core parameters: oxygen content, pH value, conductivity,
nitrate, ammonium.
 - Operational monitoring: establish chemical status and trend
of pollution of GWBs at risk. Minimum once a year.





- **List of pollutants**

- **Annex I: GW quality standards**

- Nitrates: 50 mg/l.
- Pesticides: individual 0,1 µg/l; total 0,5 µg/l.

- **Annex II: threshold values**

- Arsenic, Cadmium, Lead, Mercury, Ammonium, Chlorid, Sulphate.
- Trichlorethylene, tetrachlorethylene.
- Conductivity.
- Nitrites, Phosphorus (total) / Phosphates.

- **Some recent findings**

- COM stated in 2012:
~90% of water bodies in the EU expected to reach good GW quantitative status and 77% good GW chemical status in 2015.
But: many gaps in status assessment, methods and monitoring networks.
- Agriculture:
main source of diffuse pollution, affecting 33% of GW bodies (2012). Slight improvement on nitrates (2009).
But: 13% of the stations across Europe exceeded the 50 mg/l nitrate limit (e.g. Belgium 30%, Denmark 26%, Spain 22%, Cyprus 19%).
- Huge **variability** in ranges of **threshold values** across Europe:
different approaches followed, background levels, pollutants behaviour
→ **hard to compare!**
- **Trend reversal methodologies** need further development.



- **Ongoing activities**

- GWD implementation - Working Group GW
 - Threshold Values
 - Watch List
 - Trend assessment and reversal
- Link with DWD and water reuse
- Assessment of 2nd River Basin Management Plans
 - Quantitative status
 - Chemical status
 - Link with other topics
- 2019 review of WFD



- **Further information**

- Brochure on GWD:
<http://ec.europa.eu/environment/water/water-framework/groundwater/resource.htm>
- More on the WFD, GWD and related legislation:
<http://ec.europa.eu/environment/water/water-framework/groundwater/framework.htm>
- GWD implementation group with MS and stakeholders:
<https://circabc.europa.eu/w/browse/b1a3fb16-0308-479a-8b6d-0c056b6890e4>
- Commission Directive 2014/80/EU amended GWD Annex II.
Entered into force on 11 July 2014, transposition by 11 July 2016:
http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.182.01.0052.01.ENG



Thank you!