



# Current Analytical Challenges in Water Policy

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**More than 120 river  
basins in Europe: Are  
monitoring data  
comparable?**



# Will monitoring data play their role?



Where and what for monitoring data are used?



**WFD**  
Adopted on 20.12.2000

River Basin Districts  
Delineation of water bodies  
**2005**

Analysis of pressures  
and impacts  
**2005**

Design of monitoring  
programmes  
**2006**

**RBMP – 2009/2015**

Programmes of  
Mesures  
**2012**

Classification of water bodies  
“at risk”

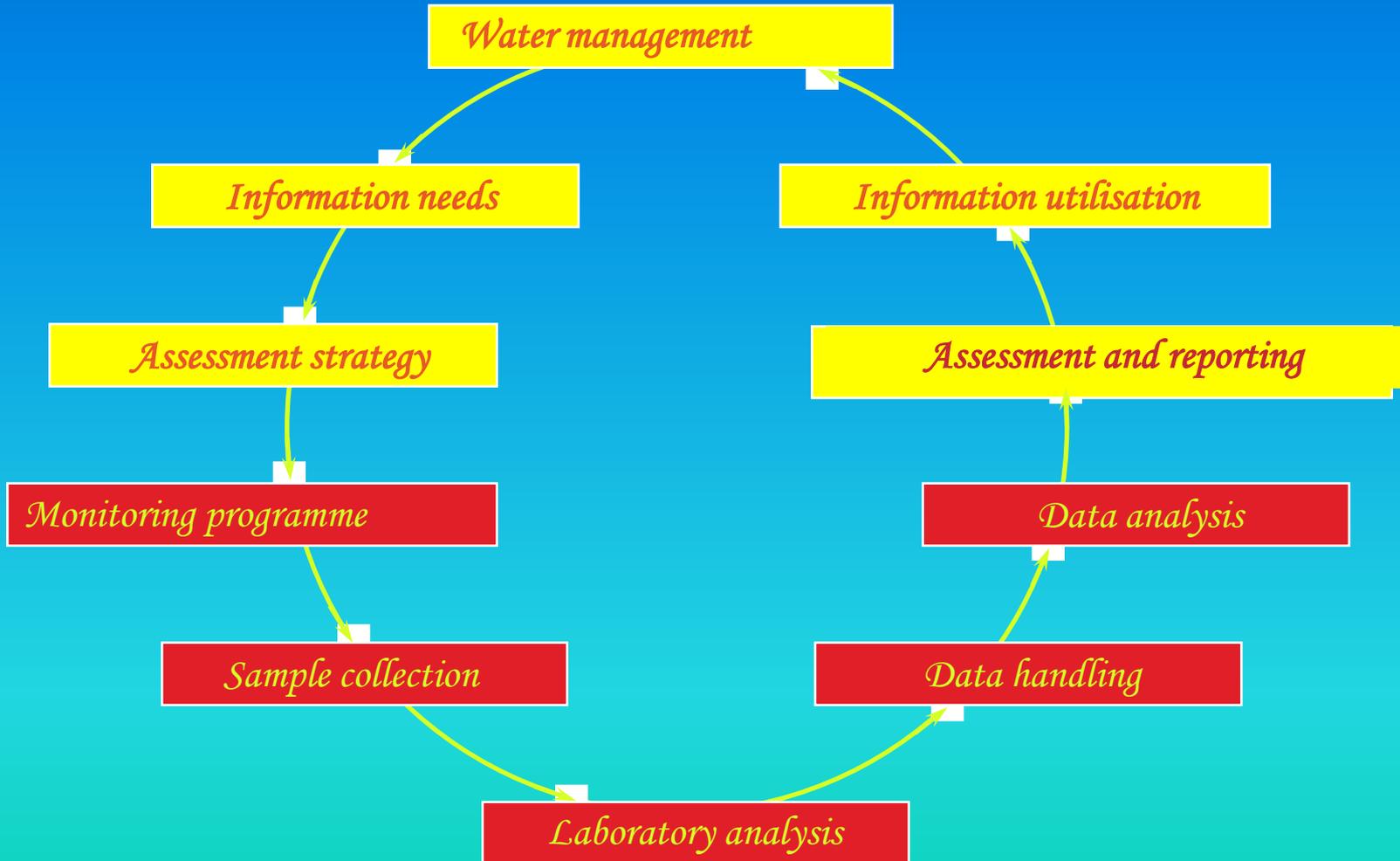
Taking in account the classification:

- ☐ Surveillance monitoring
- ☐ Operational monitoring  
(+ investigative monitoring)

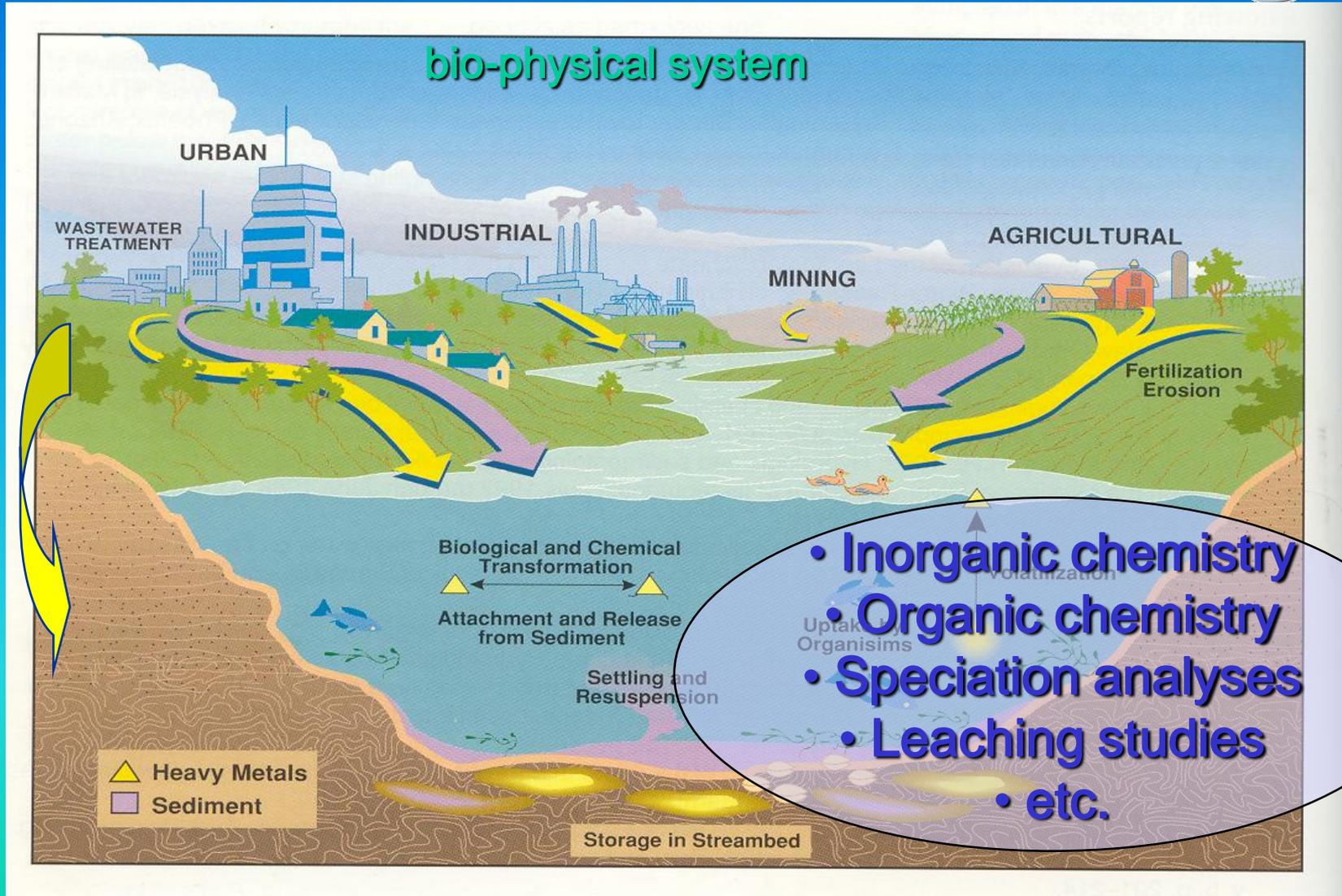
Cycle de 6 ans / Révision

**GOOD STATUS  
OBJECTIVE**

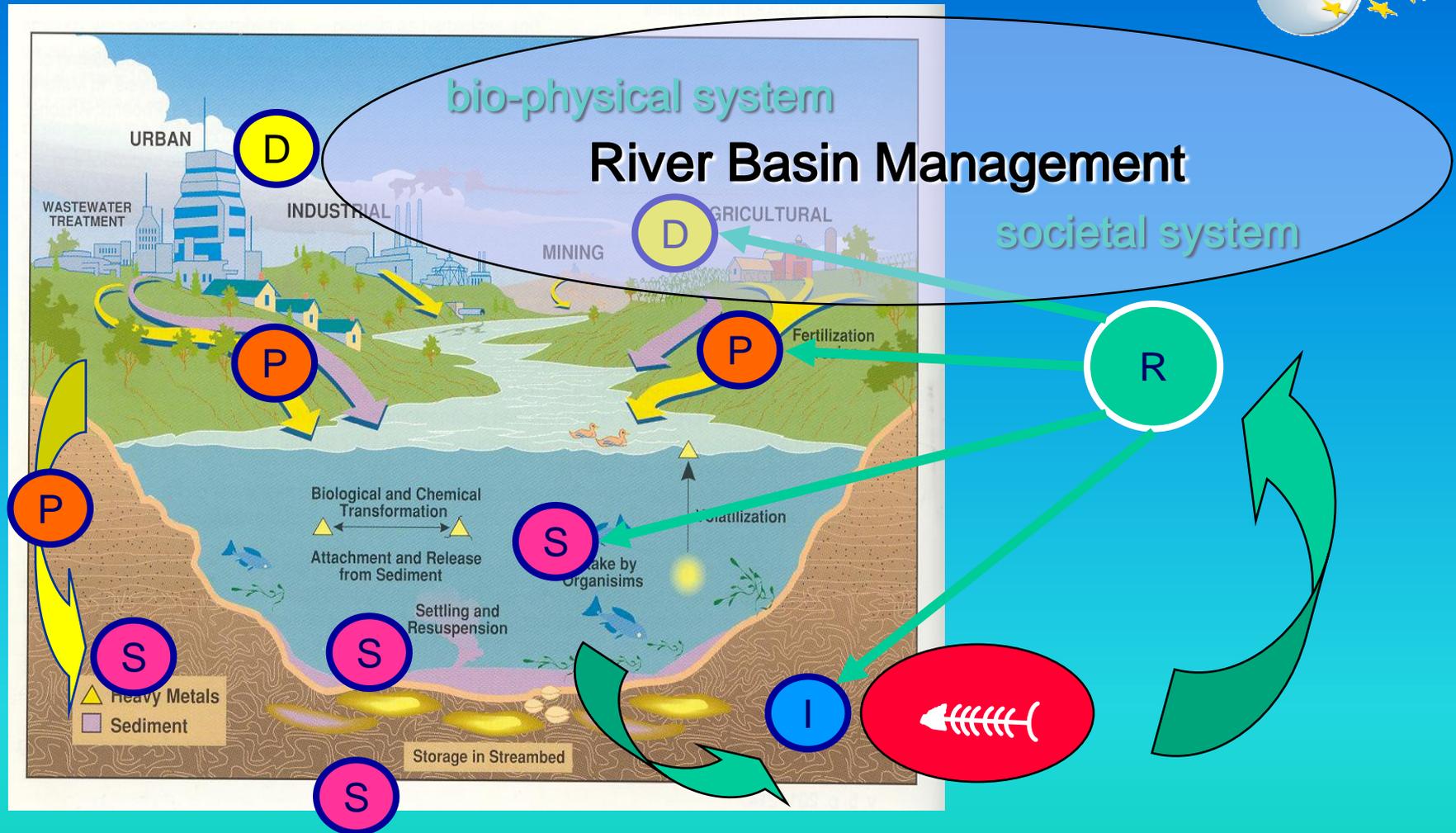
# Water Management cycle



# Improving system understanding

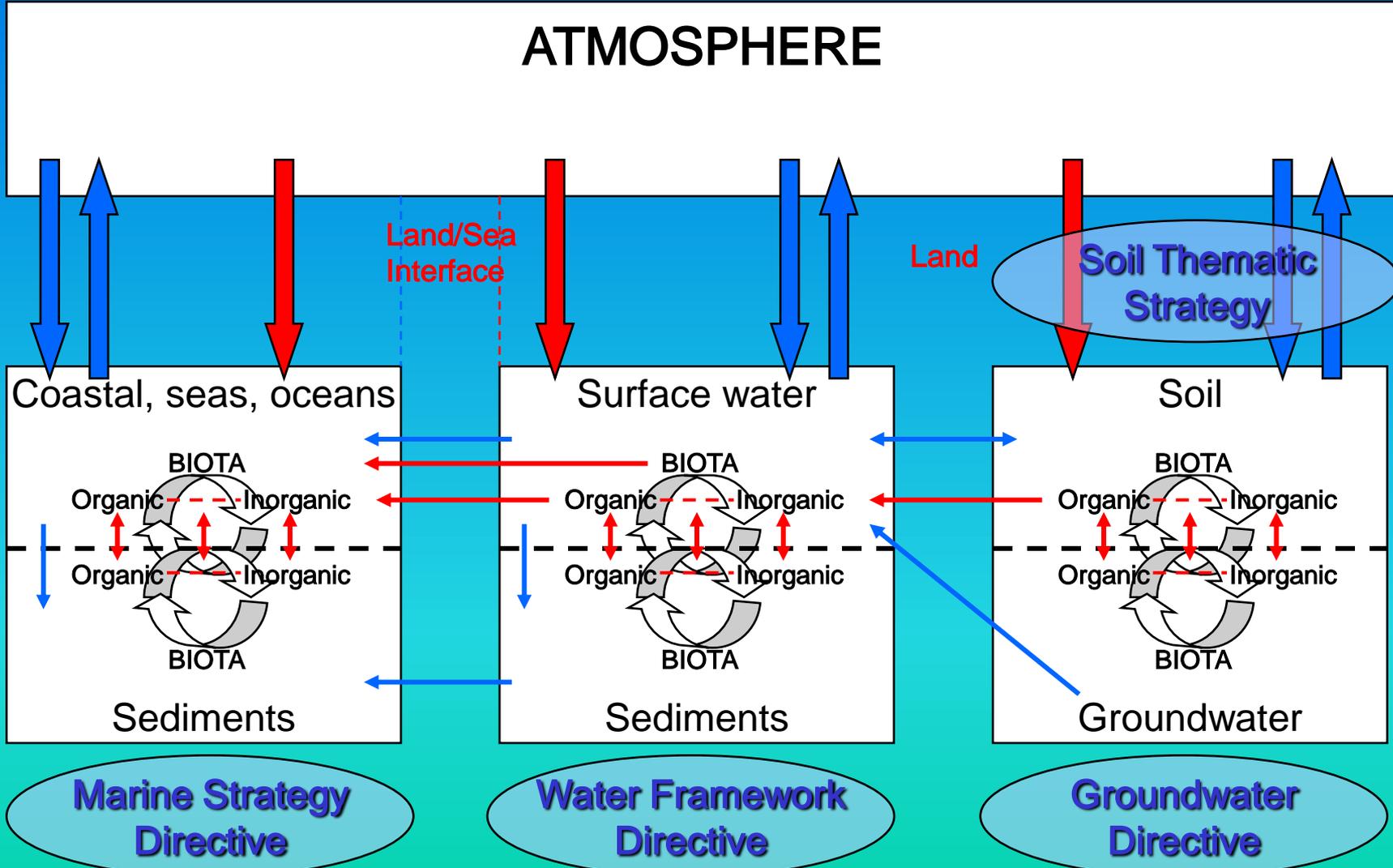


# Needs for integrated monitoring in support of IWRM

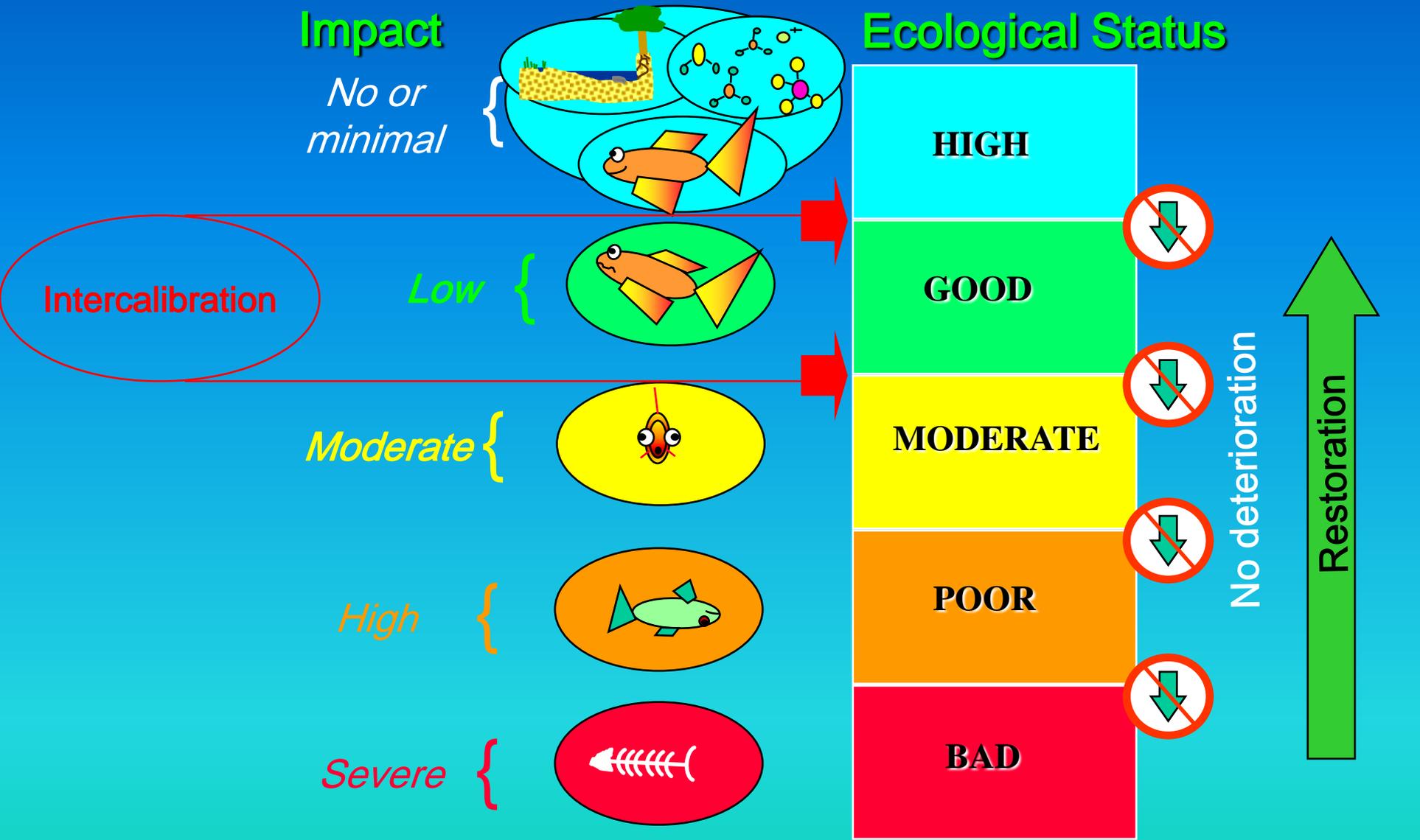


Base sketch from Meade (1996) and DPSIR from EEA

# Also integrating different environmental compartments in the light of EU Directives

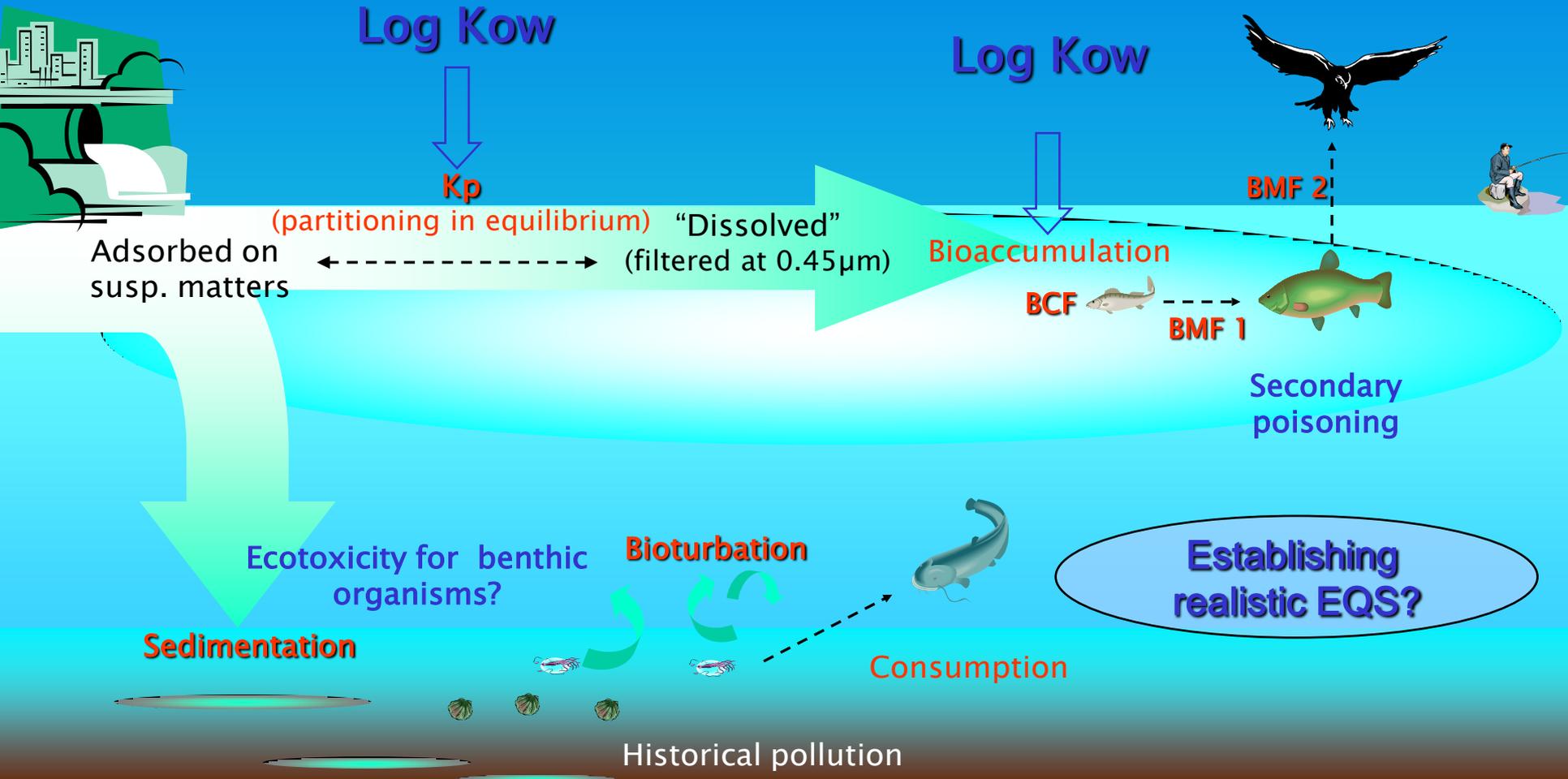


# Environmental objective for surface waters



Links between Chemical and Ecological status?

# EQS for sediment and biota: relevant for hydrophobic pollutants



>100000 chemical compounds:  
Industrial, pharmaceutical, etc.



**Directive  
76/464 on  
hazardous  
substances**

DDT and metabolites  
(DDD, DDE)  
Aldrin  
Dieldrin  
Endrin  
Isodrin  
Carbon tetrachloride  
Perchloroethylene  
Trichloroethylen

Cadmium and its compounds  
1,2-Dichloroethane  
Hexachlorobenzene  
Hexachlorobutadien  
Hexachlorocyclohexane  
Mercury and its compounds  
Pentachlorophenol  
Trichlorobenzene  
Trichloromethane

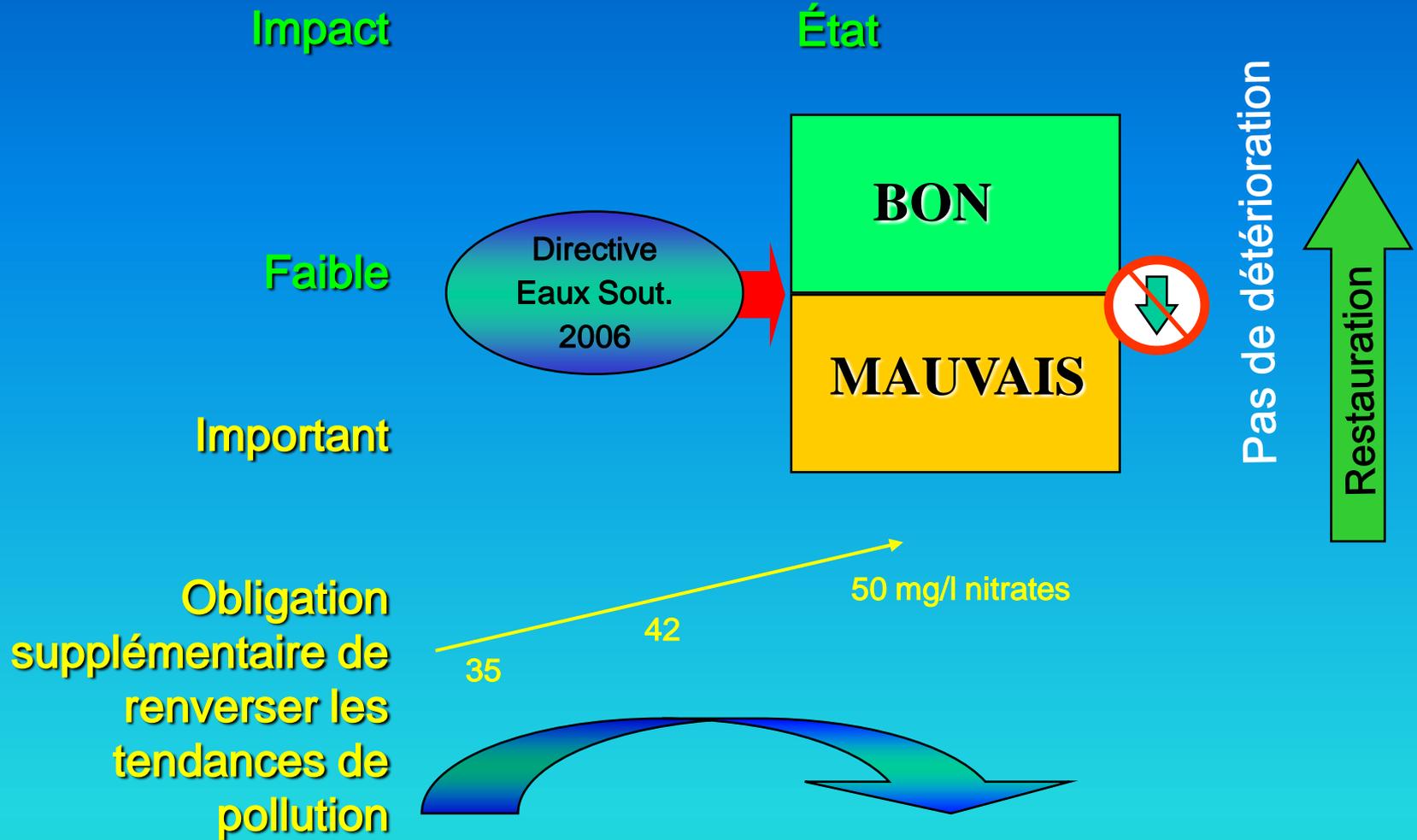
Alachlor  
Atrazine  
Benzene  
Brominated  
Diphenylethers  
C10-13 Chloroalkanes  
Chlorfenvinphos  
Chlorpyrifos  
Dichloromethane  
Di(2-ethylhexyl)phthalate  
Diuron  
Endosulfan  
Isoproturon  
Lead and its compounds  
Nickel and its compounds  
Nonylphenols  
Octylphenols  
Pentachlorobenzene  
Polyaromatic  
Hydrocarbons  
Simazine  
Tributyl-étain  
Trifluralin

**WFD  
Priority  
substances**

**Lists of pollutants  
of OSPAR,  
Drinking Water  
Directive etc.**

**River basin  
specific pollutants**

# Objectif environnemental pour les eaux souterraines

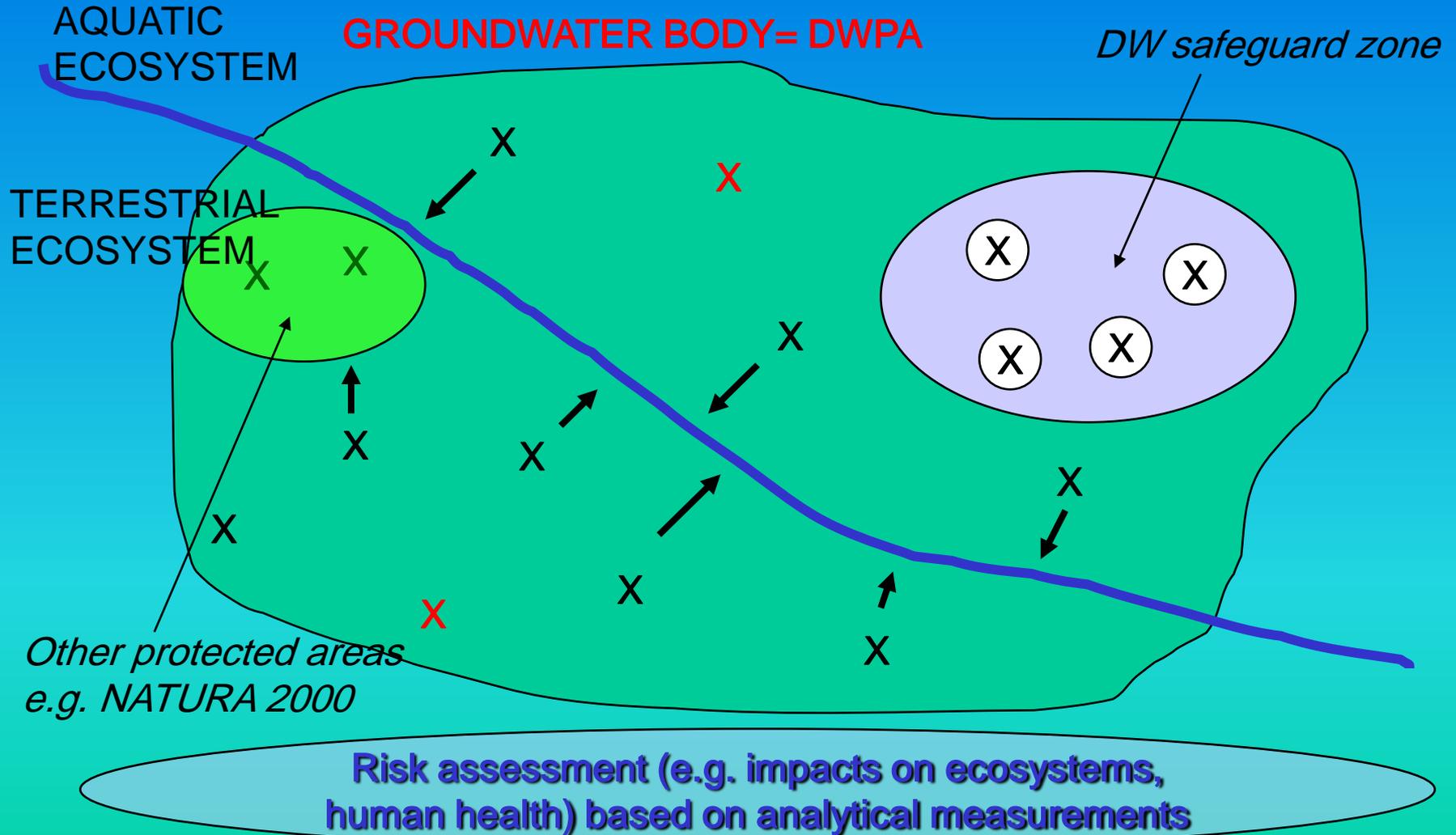


Links between groundwater and aquatic and terrestrial ecosystems? Trend studies?

# LINKS WITH PROTECTED AREAS

X – Threshold value: **25 µg/l** (account of NBL + interactions)

⊗ – DW safeguard zone (DW standard of **10 µg/l**): minimum treatment should apply = compliance to Art. 7(3) of WFD



# INTEGRATION



⇒ All waters

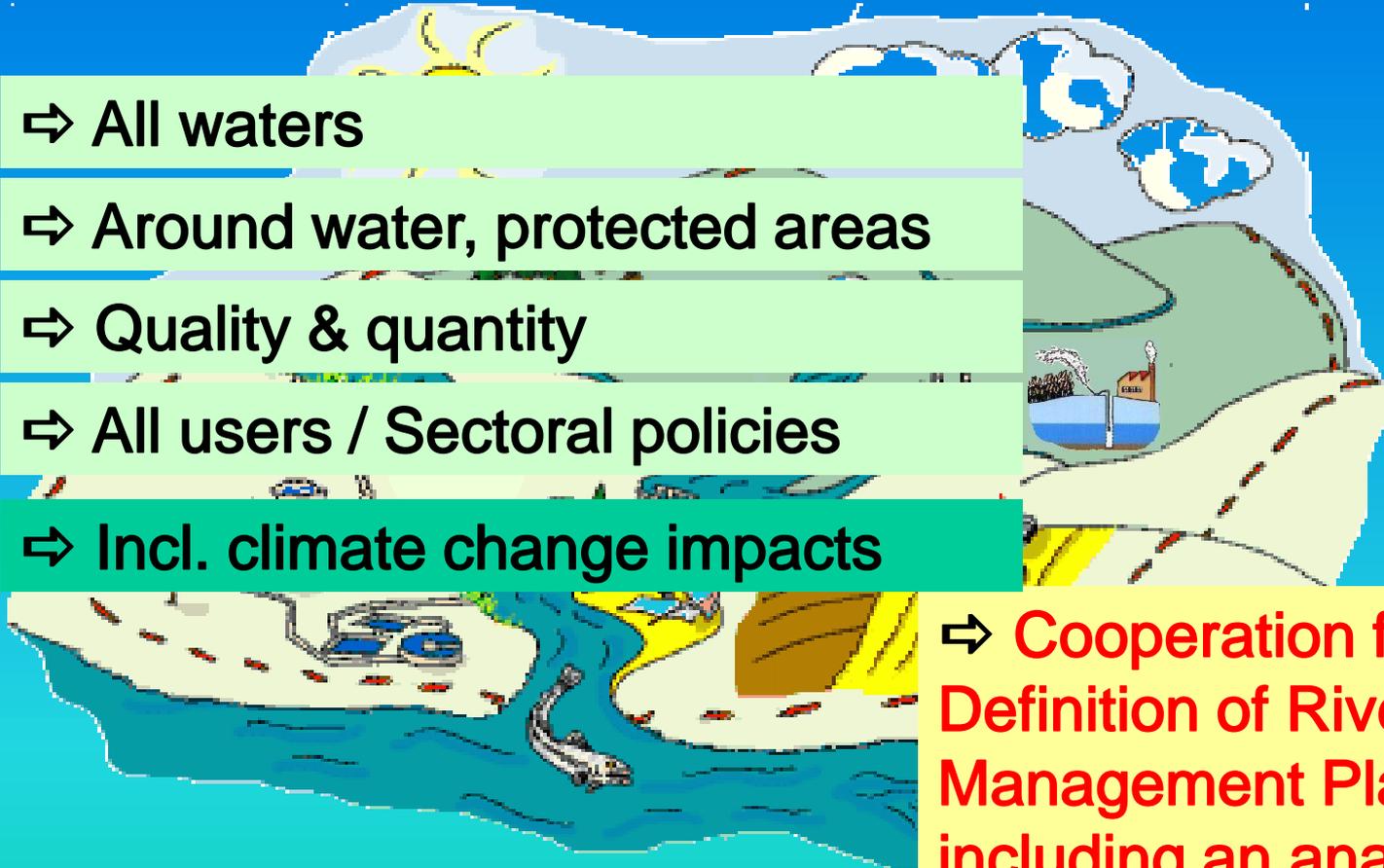
⇒ Around water, protected areas

⇒ Quality & quantity

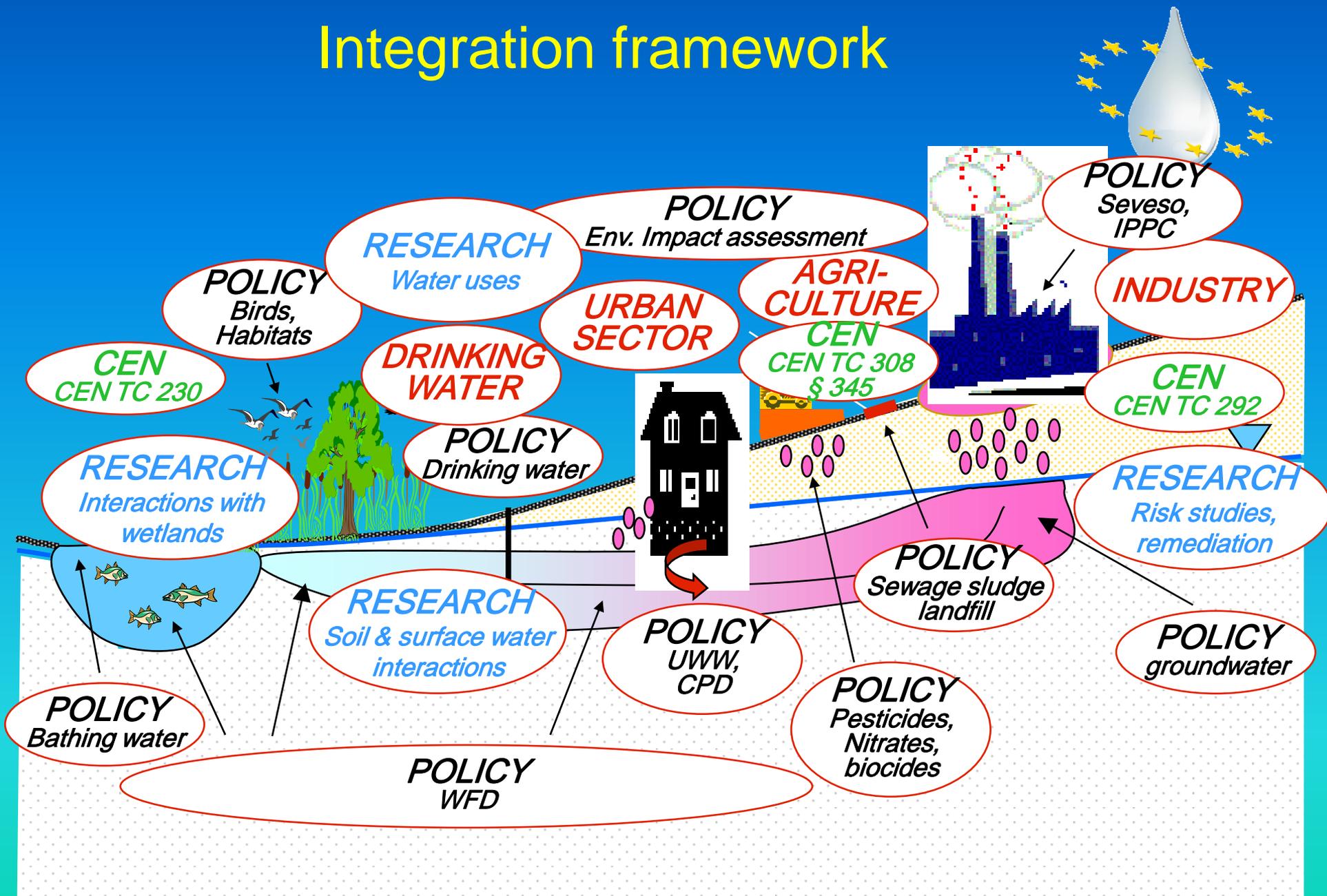
⇒ All users / Sectoral policies

⇒ Incl. climate change impacts

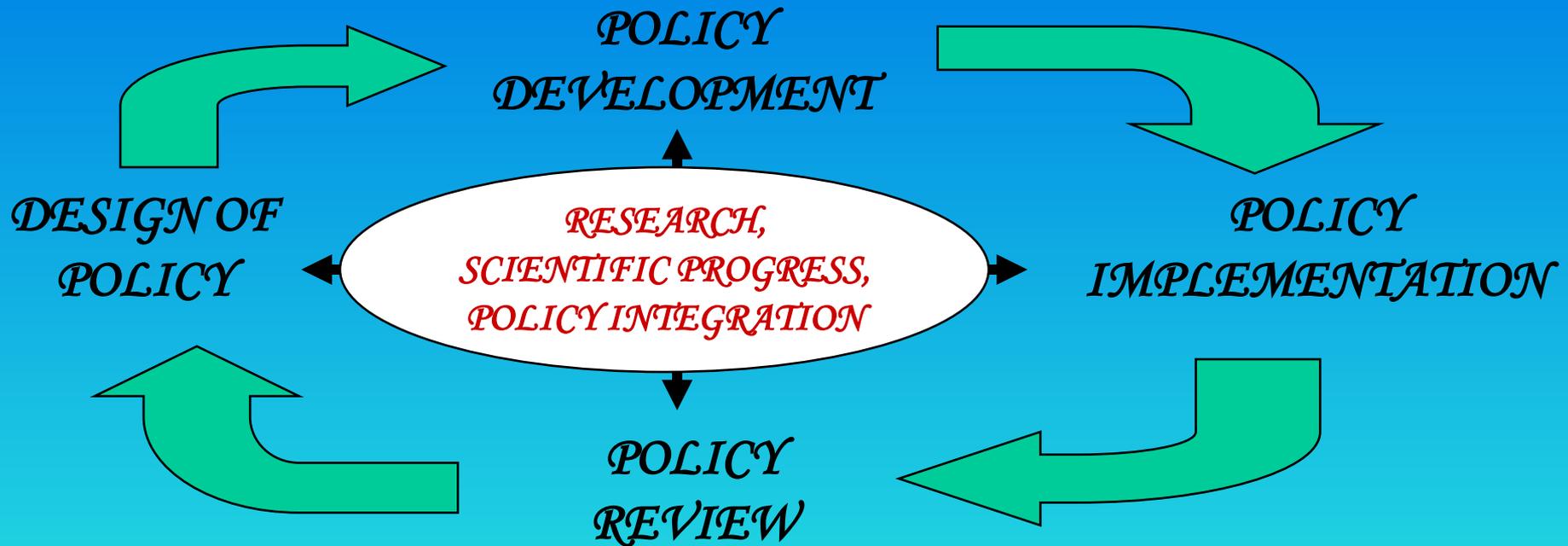
⇒ **Cooperation for  
Definition of River Basin  
Management Plan  
including an analysis of  
pressures, impacts and  
uses**



# Integration framework



# Needs for an operational science-user's interface



# Challenges & needs for further networking



Legal framework

Scientific/Analytical framework

Role of the Commission (ENV, RTD, JRC)?

Role of the Member States?

Role of the analytical/metrology community?

QA/QC

Proficiency testing  
(interlab. + field trials)  
RMs, training

Link with EAQC-WISE  
+ EA (accreditation)

Standardisation

Pre- & co-normative  
research  
*In-situ* validation

Link with CEN/TC 230  
via DG ENTR

Emerging pollutants

Analytical developments  
Ecotoxicity testing  
Pollutant pathways

Link with NORMAN  
(links with ECHA?)

# Final question marks about challenges



- **Analytical data** are key elements of water policy implementation – What about data quality?
- **Traceability principles** are well accepted by the “metrological community” but – How to make them accepted by not yet in water management decision-maker’s minds?
- **Analytical knowledge** is required to better understand bio-, geo-chemical pathways, including ecotoxicity patterns – Will we be able to ensure a usable and sustainable flow of scientific information to policy-makers?
- **In other words:** What is the best way forward to make EAQC-WISE, Norman and standardisation-related recommendations accepted and operational?