



Future development needs of the Water Framework Directive

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NATURAL ENVIRONMENT RESEARCH COUNCIL

3 day e-Conference on future of WFD

- Monitoring and Assessment systems
- Programmes of Measures
- The Policy mix
- 21 invited expert speakers and panellists
- 249 people attended
- 27 European countries represented
- Post conference questionnaire survey



Contents lists available at ScienceDirect

Science of the Total Environment

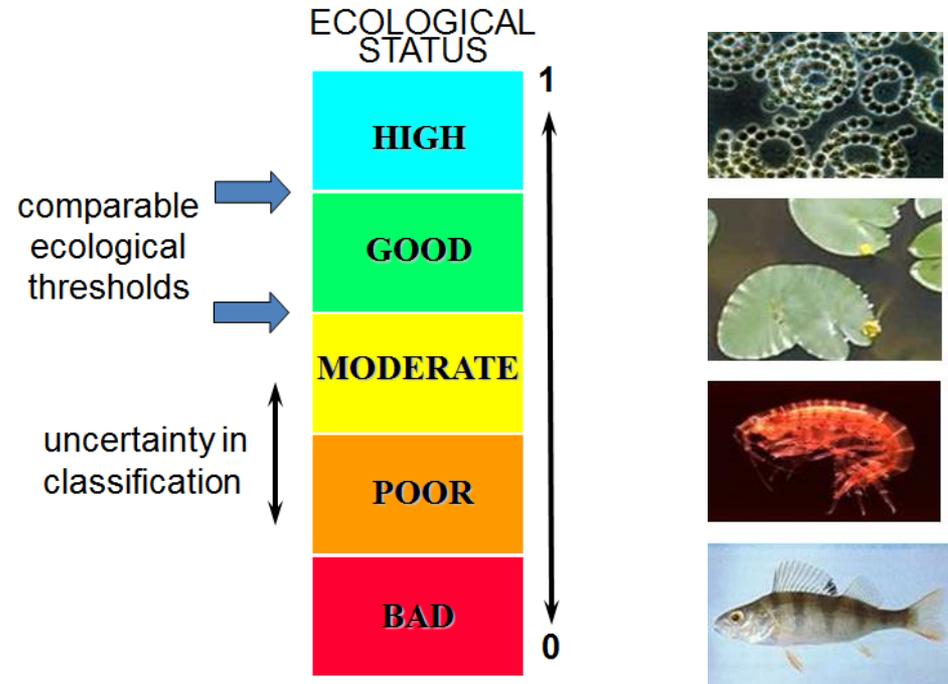
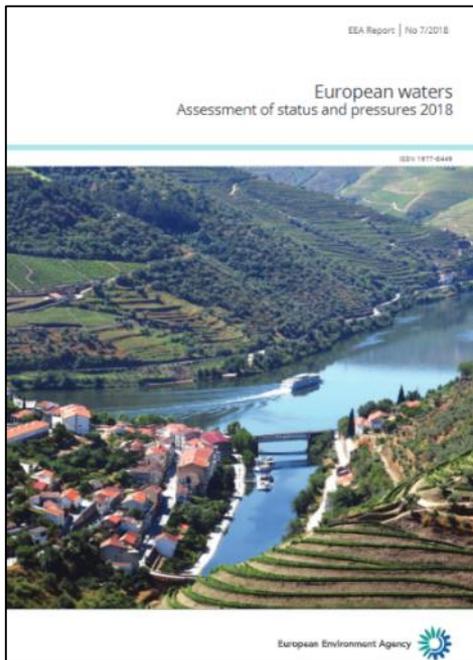
journal homepage: www.elsevier.com/locate/scitotenv

Protecting and restoring Europe's waters: An analysis of the future development needs of the Water Framework Directive

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Strengths

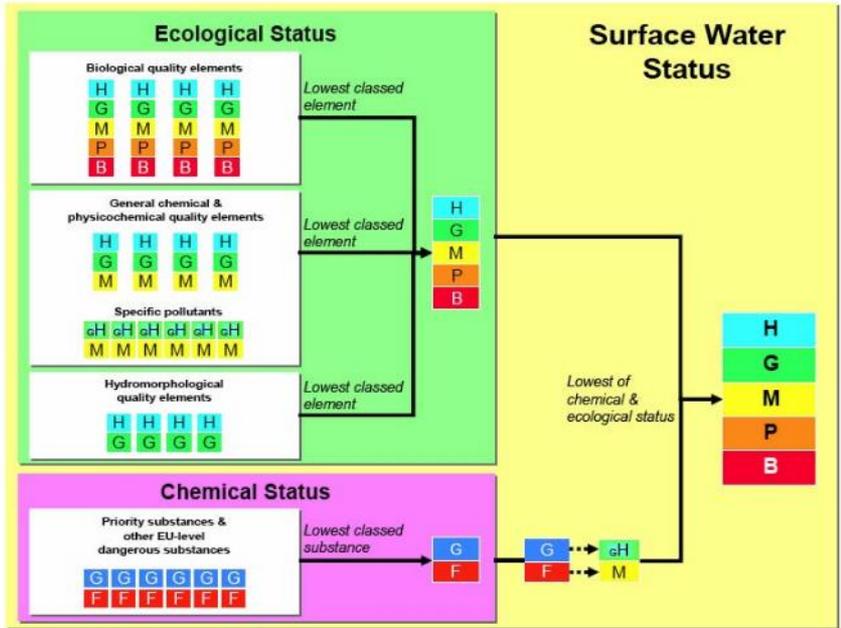
- Puts ecosystem health at the centre of objectives
- Comparable assessment across Europe



Results

- Only 40% of surface waters are in good ecological status or better
- Limited change in status between 1st and 2nd River Basin Management Plans

Monitoring & Assessment: Recommendations for Fitness Check



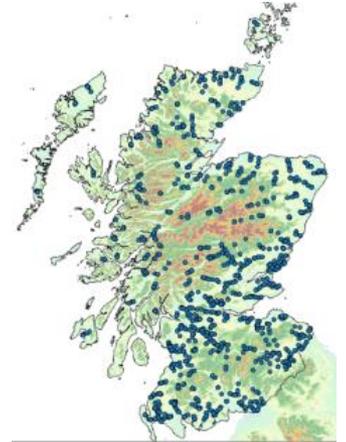
Over-precautionary *One-Out-All-Out*
Emphasise success in individual metrics and use “weight of evidence approach”



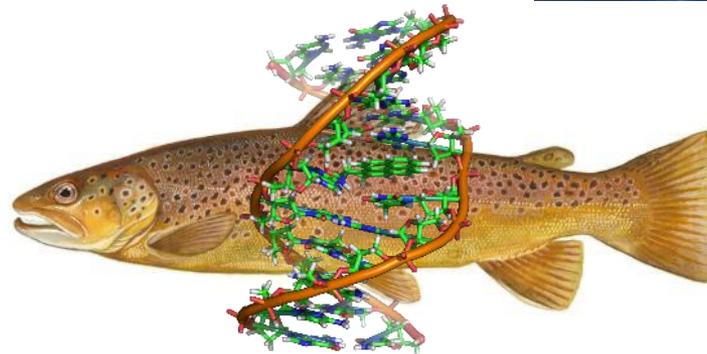
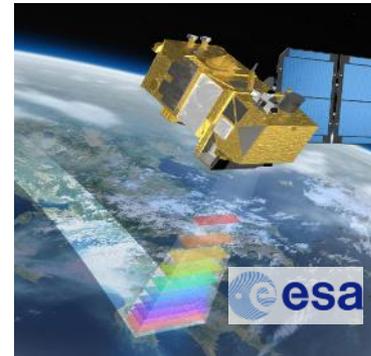
Assessment does not identify cause of degradation
Use monitoring data more effectively to improve water management decisions (diagnostic tools)

Future Innovation in Monitoring & Assessment

- Optimising network design (status assessment)
- Sentinel sites (measure trends & emerging threats)
- Landscape “experiments” to assess effectiveness of measures (control vs intervention)



- Earth Observation & Remote Sensing
- Citizen science
- eDNA



Management Measures: strengths and weaknesses

- Integrative, participatory management framework at RB-scale
- Successes with point-source pollution e.g. Nerbioi estuary fishery (Pouso et al., 2018)
- Basic & supplementary measures insufficient to deliver success with diffuse and STP storm-event sources
- Delays in implementation



Management Measures: Recommendations for Fitness Check

Much greater implementation of measures needed

- Incorporate Ecosystem Approach in future WFD to highlight benefits and strengthen societal support
- Mechanisms to improve cooperation between stakeholders, upstream and downstream (polluters & beneficiaries)



Policy Integration: strengths and weaknesses

- Integrating previous water policies
- Water-Biodiversity Policy

- Poor integration of water quantity vs quality policies (Floods Directive)
- Conflicting objectives between sector policies e.g. CAP vs WFD



Policy Integration: Recommendations for Fitness Check

Need to go further with policy integration

- Water-Energy-Food-Health (SDGs)
- Reciprocity – “sustainable intensification”



Restoring Connectivity *– not always a good thing*



Climate change affects:

- WFD Monitoring: reference conditions & status assessment
- WFD Management: rates and trajectory of recovery
- WFD Policy: need to strengthen provisions for adaptation and mitigation measures (floods and drought)

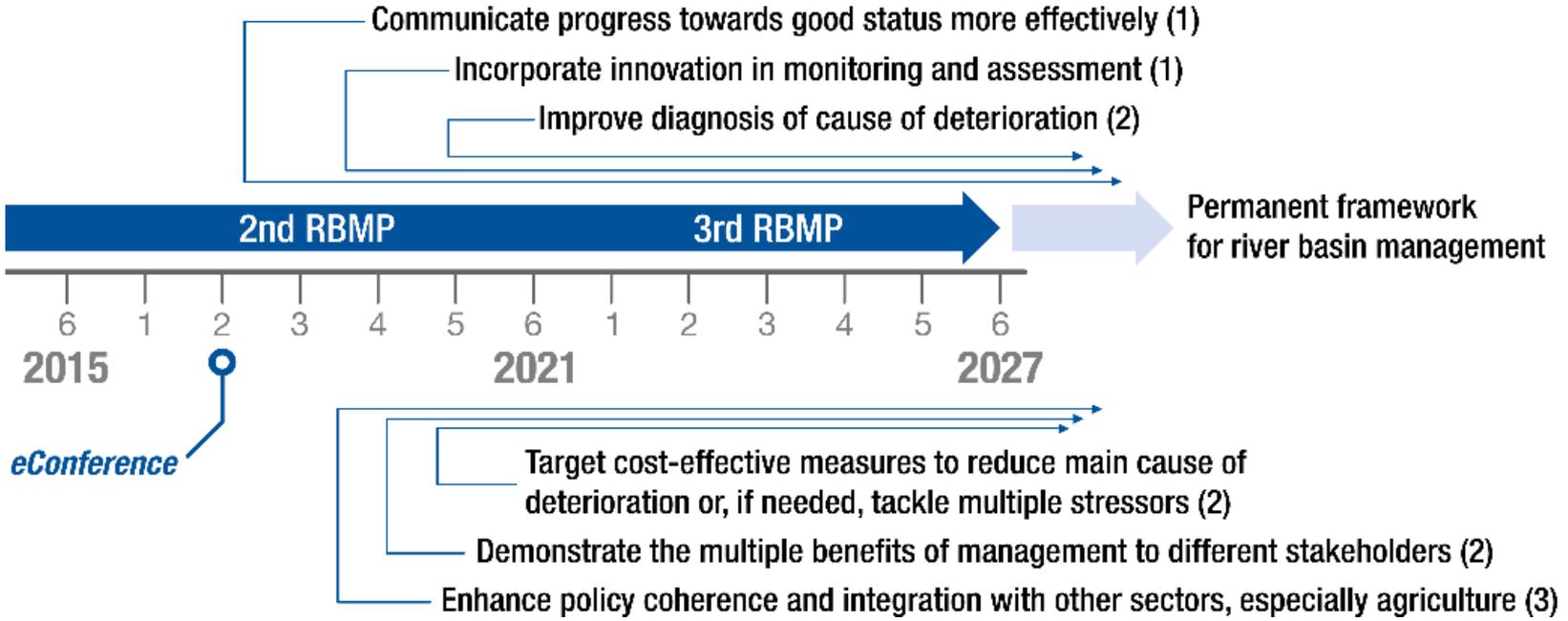


Recommendations for Fitness Check: Beyond 2027

- Maintain momentum of the WFD
- Acknowledge time and resource needed to negotiate and implement sufficient measures
- Elaborate how “natural conditions” affect rate of recovery
- Consider *temporary* less stringent objectives



**Need a RBMP process and
realistic targets for post-2027**



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