

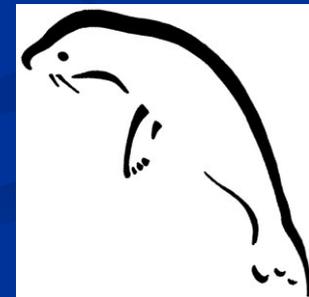
JASPERS Networking Platform
Workshop on the implementation of the
Water Framework Directive in projects
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**Ensuring WFD compliance: a
checklist tool**

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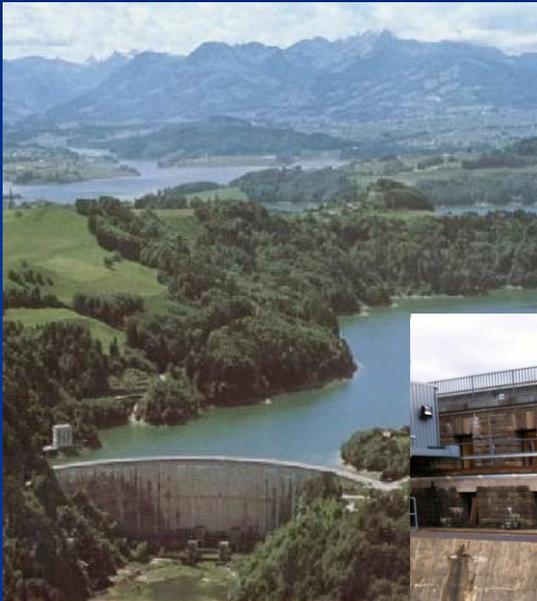
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New physical modifications affecting surface water bodies

- WFD acknowledges certain human activities rely on physical modification of surface water bodies
 - e.g. Article 4(3) allows HMWB designation
 - e.g. Article 4(7) sets out tests if new physical modification will affect ecological status
- CIS Guidance 20 clarifies Article 4(7) is concerned with non-temporary effects on status at water body level
- But how does a project proponent know whether a proposed development will affect WFD status?

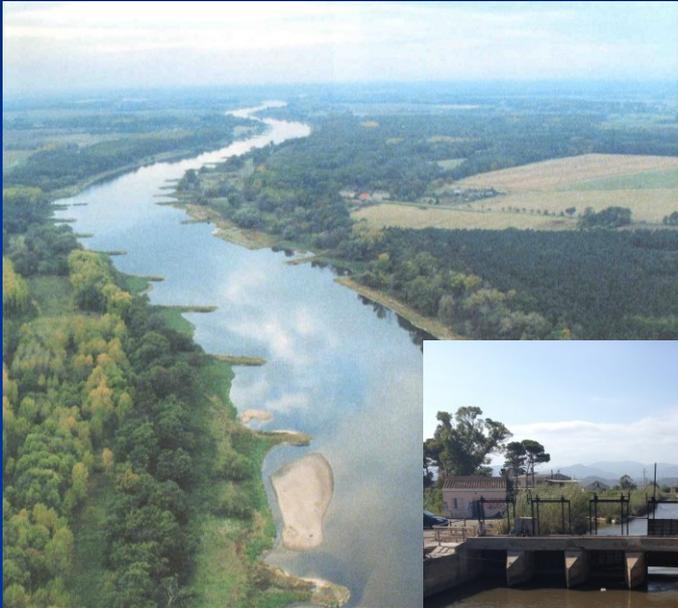
Sometimes more obvious ...



... other times, less so



... other times, less so



Critical questions in determining WFD compliance

- Will effects on ecological status be temporary (when compared to monitoring frequency for affected element)?
- Will effects be local within water body context? i.e. will status be affected at water body level?
- Do the Article 4(7) tests need to be applied?
- Is the proposed modification WFD-compliant in terms of chemical as well as ecological status?
- If there will be deterioration in chemical status, usually no derogation under WFD

Critical questions

- Is development WFD-compliant in terms of chemical as well as ecological status?
- If deterioration in chemical status leads to a derogation under Article 4(7), will this be a local derogation?
- Will the derogation be local within water body context? i.e. will status be affected at water body level?
- Do the Article 4(7) tests need to be applied?

DONT FORGET!
Effect on status = deterioration or compromise expected improvement

Checklist-based initial assessment

- Developed for JASPERS
- Applied in first instance to port capital dredging proposal, flood reservoir modernisation and downstream flood defence works, river training works, flood gates, etc.
- Four-step approach ...

Four step approach

- Understand context: is there a potential causal mechanism for an effect on ecological or chemical status? If no, keep record for audit but no further assessment required. If yes ...
- Determine scope: WFD assessment required only for elements that could be affected ...
- Investigations: data collection; evaluation; consider mitigation measures. Is there a residual effect on WFD status? If yes ...
- Apply the Article 4(7) tests

Four step approach

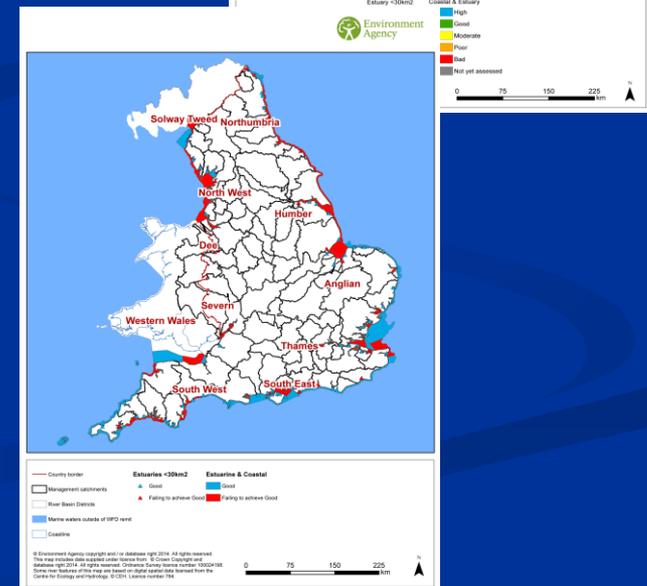
1. Understand context
morphology

DON'T FORGET!
Any new modification or alteration to or development of a water body has the characteristics of a water body and has the potential to affect its status. This does not mean, however, that Article 4(7) always needs to be applied. Rather that evidence is required to demonstrate whether or not status will be affected

4. Apply tests

WFD compliance checklist: Step 1

- Collate project details including alternatives
- Identify potentially affected water bodies including up- and down-stream
- Size/scale of each water body
- Current ecological, chemical status of each water body including failing elements; consider protected areas



WFD compliance checklist: Step 1

- Collate project details including alternatives
- Identify potentially affected water bodies including up- and down-stream
- Size/scale of each water body
- Current ecological, chemical status of each water body including failing elements; consider protected areas
- Mechanism for effect?

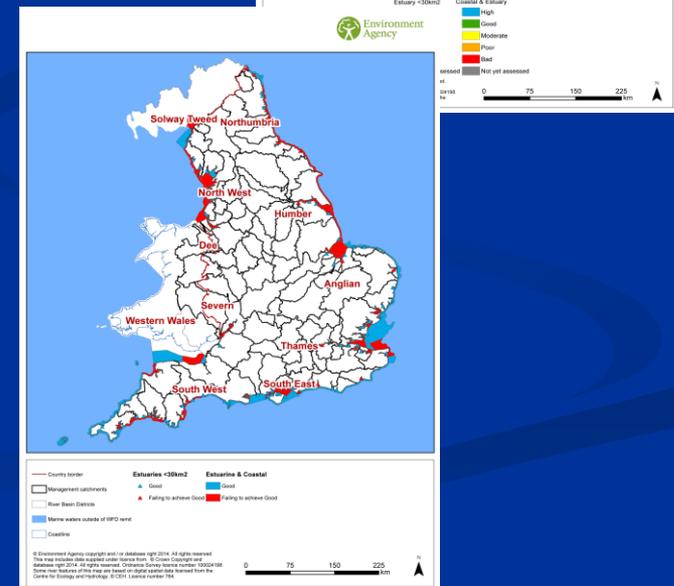


Table 1a WFD compliance assessment cause-and-effect mechanisms (Rivers)

WFD elements and sub-elements	Is there a possible causal mechanism for a direct effect on...? ⁴	Is there a possible causal mechanism for an indirect effect on...? ⁵
Hydromorphological supporting elements		
Hydrology: quantity and dynamics of flow		
Hydrology: connection to ground waters		
River continuity		
Morphology: river depth and width		
Morphology: river bed structure, substrate		
Morphology: riparian zone structure		
Physico-chemical supporting elements		
Thermal conditions		
Oxygenation		
Salinity		
Acidification		
Nutrient conditions		
Specific synthetic		

Example: river dredging for conveyance

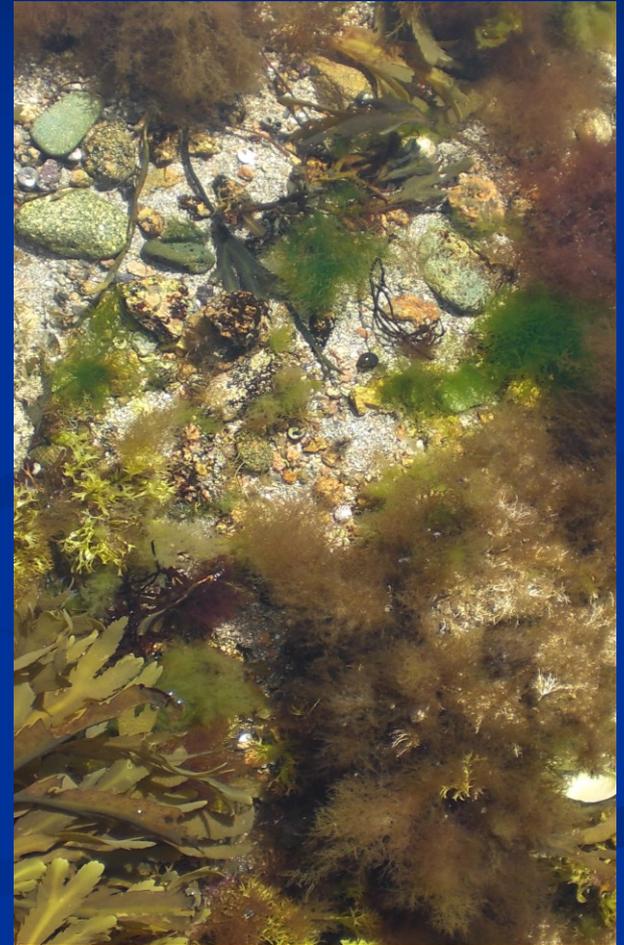
Zone structure			
Physico-chemical supporting elements			
Thermal conditions	Direct effects	No	Indirect effects
Oxygenation	→	Yes	→
Salinity		No	No
Acidification		No	No
Nutrient conditions		No	No
Specific synthetic pollutants		No	No
Specific non-synthetic pollutants		No	No
Biological quality elements			
Phytoplankton		No	No
Macrophytes and phytobenthos		No	Yes
Benthic invertebrate fauna		Yes	Yes
Fish fauna		No	Yes
Chemical status			
Priority substances (see Table 3)		No	No
Priority hazardous		No	No

Step 1 outcome

- Taking into account the size and current status of the water body(ies), is it possible that the proposed project could in any way affect the ecological or chemical status of the water body or water dependent EU protected area? (i.e. is there a potential cause-and-effect mechanism?)
- If no, document the evidence supporting this conclusion
- If yes or uncertain, continue to Step 2

Step 1 purpose

- Broad filter to 'screen out' projects that will clearly not affect status at the scale of the water body; to identify WFD elements / sub-elements requiring further attention
- Equivalent to Article 6(3) 'likely significant effect' test under Habitats Directive
- Focuses on potentially affected elements and sub-elements to help ensure subsequent assessment is proportionate



WFD compliance checklist: Step 2

- Understand designations, exemptions applied and objectives set, including protected areas
- Identify relevant measures in RBMP
- For elements where potential causal mechanism is identified, differentiate between effects that are temporary or local in water body context vs. longer term or water body scale effects



Table 2a WFD compliance assessment scoping table (Rivers)

Under each heading, identify the sub-element(s) that could potentially be affected by the project	✓	Will the effect be temporary ? <i>Yes / No / Uncertain</i>	Will the effect be insignificant at the scale of the water body? <i>Yes / No / Uncertain</i>
Hydromorphological supporting elements			
Hydrology: quantity and dynamics of flow			
Hydrology: connection to ground waters			
River continuity			
Morphology: river depth and width			
Morphology: river bed structure, substrate			
Morphology: riparian zone structure			
Physico-chemical supporting elements			
Thermal conditions			
Oxygenation			
Salinity			
Acidification			
Nutrient conditions			
Specific synthetic pollutants			
Specific non-synthetic pollutants			
Biological quality elements			
Phytoplankton			
Macrophytes and phytobenthos			
Benthic invertebrate fauna			
Fish fauna			
Chemical status			
Priority substances (see Table 3)			
Priority hazardous substances (Table 3)			
EU protected areas (see WFD Annex IV)		Could the status of EU protected area(s) be compromised? <i>Yes / No / Uncertain</i>	

Example: river dredging for conveyance

Table 2a WFD compliance assessment scoping table (Rivers)			
Under each heading, identify the sub-element(s) that could potentially be affected by the project	✓	Will the effect be temporary? Yes / No / Uncertain	Will the effect be insignificant at the scale of the water body? Yes / No / Uncertain
Hydromorphological supporting elements			
Hydrology: quantity and dynamics of flow	✓	No	Uncertain
Hydrology: connection to ground waters			
River continuity			
Morphology: river depth and width	✓	No	No
Morphology: river bed structure, substrate	✓	No	No
Morphology: riparian zone structure	✓	Uncertain	Uncertain
Physico-chemical supporting elements			
Thermal conditions			
Oxygenation	✓	Yes	Yes
Salinity			
Acidification			
Nutrient conditions			
Specific synthetic pollutants			
Specific non-synthetic pollutants			
Biological quality elements			
Phytoplankton			
Macrophytes and phytobenthos	✓	Uncertain	Uncertain
Benthic invertebrate fauna	✓	Uncertain	Uncertain
Fish fauna	✓	Yes	Uncertain
Chemical status			
Priority substances (see Table 3)			
Priority hazardous substances (Table 3)			
EU protected areas (see WFD Annex IV)		Could the status of EU protected area(s) be compromised? Yes / No / Uncertain	

Step 2 outcome



- Are all potential effects temporary and/or local and there are no effects on water-dependent protected areas?
- If yes, document the evidence supporting this conclusion
- If no or uncertain, continue to Step 3

Step 2 outcome



DON'T FORGET!
Step 2 aims to determine whether further assessment is needed and if so, which elements or sub-elements should be investigated in more detail

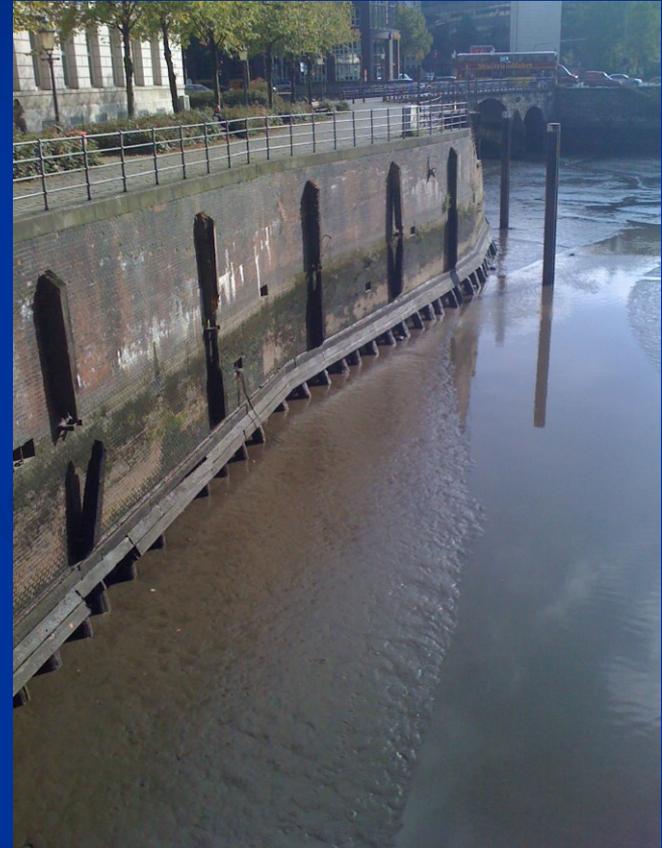
- Are all potential hazards identified and there are no further elements to be investigated?
- If no or uncertain, continue to Step 3

WFD compliance checklist: Step 3

- Step 2 helps determine scope of further investigations required but scope should be confirmed with WFD competent authority before commencing investigations
- River dredging example, investigations to cover:
 - Hydrology (flow)
 - Morphology (depth, bed, riparian zone)
 - Biological quality elements (macrophytes, benthic invertebrates, fish)

WFD compliance checklist: Step 3 (cont)

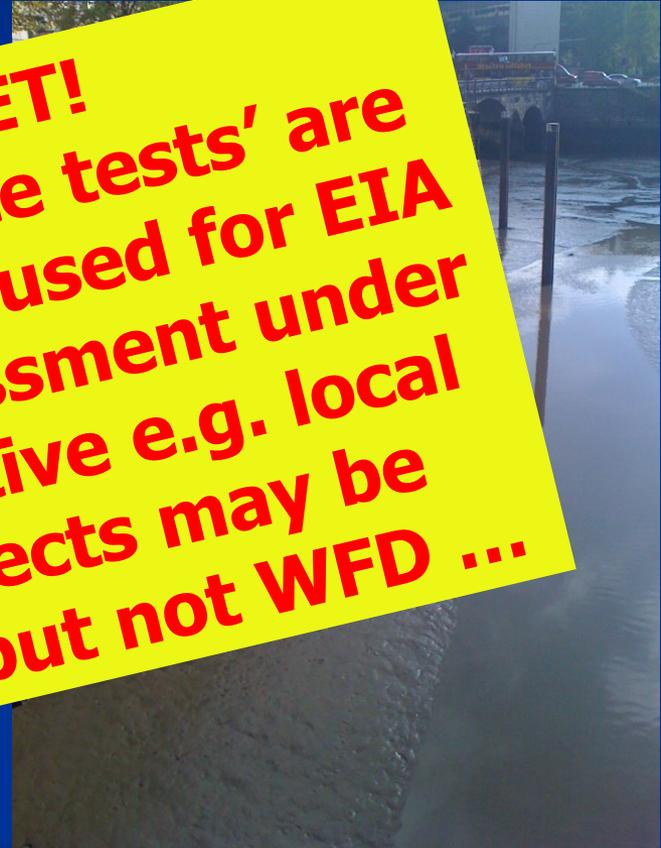
- Potential to align data collection with EIA at this step ...
- Collect/collate data, evaluate, assess ...
- Consider whether proven and effective mitigation measures can be incorporated into design
- Determine 'significance' but ...



WFD compliance checklist: Step 3 (cont)

- Potential to align data collection with EIA at this step ...
- Consider evaluation
- Consider and measure incorporation
- Determine 'significance' but ...

DON'T FORGET!
The WFD 'significance tests' are different from those used for EIA or appropriate assessment under the Habitats Directive e.g. local or temporary effects may be significant in EIA but not WFD ...



WFD compliance checklist: Step 4

- Is it expected that there could be a non-temporary effect on status (i.e. deterioration or prevention of an improvement) at water body level, or an effect on the status of a water-dependent protected area?
- Have all practicable, **proven and effective** mitigation measures been designed-in to the project to eliminate effect on status?
- Is it necessary to apply the Article 4(7) tests?
- If no, document the evidence supporting this conclusion
- If yes, consider ...

Article 4(7) tests

- Do (other) relevant, practicable and not disproportionately costly mitigation measures exist?
- Are there any environmentally better, technically viable and not disproportionately costly alternatives?
- Are there reasons of overriding public interest or do the benefits of the modification outweigh the benefits of achieving the WFD objectives for the water body?
- Is the proposed modification discussed in the RBMP or can this be done retrospectively?

Article 4(7) tests

- Do other relevant, practicable and not disproportionately costly mitigation measures exist?
- Are there any environmental, technical, economic, or socially viable and practicable alternative measures?
- Are the benefits of the proposed modification outweigh the interest or benefits of the water body? If the benefits of the proposed modification outweigh the interest or benefits of the water body, the proposed modification still need to be applied
- Is the proposed modification discussed in the RBMP or can this be done retrospectively?

DON'T FORGET!
If the Article 4(7) tests are met, Articles 4(8) and 4(9) still need to be applied

In conclusion ...

- Prudent to demonstrate WFD compliance for most projects involving physical modification
- If WFD-compliant, no need to apply Article 4(7)
- Informed decision on Article 4(7) = site specific
- If Article 4(7) does need to be applied, all four tests must be met
- Analysis for applying exemptions should be as simple as possible but as detailed as necessary i.e. proportionate to risk posed by project
- **If a project fails the Article 4(7) tests, it cannot proceed**

Thanks for listening!



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For info or further questions on this presentation, please contact:

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