

Understanding how changes in freshwater quality affect delivery of ecosystem services

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Content

- Theory: Linking the frameworks
- Practice: Measuring services using WFD?
- Summary (shortcomings and challenges)

Theory: Linking the frameworks

WFD versus Ecosystem Service Approach (ESA)

	WFD	ESA
Perspective		
Value		
Management objective		
Spatial scope		

* Choice depends on contextual values.

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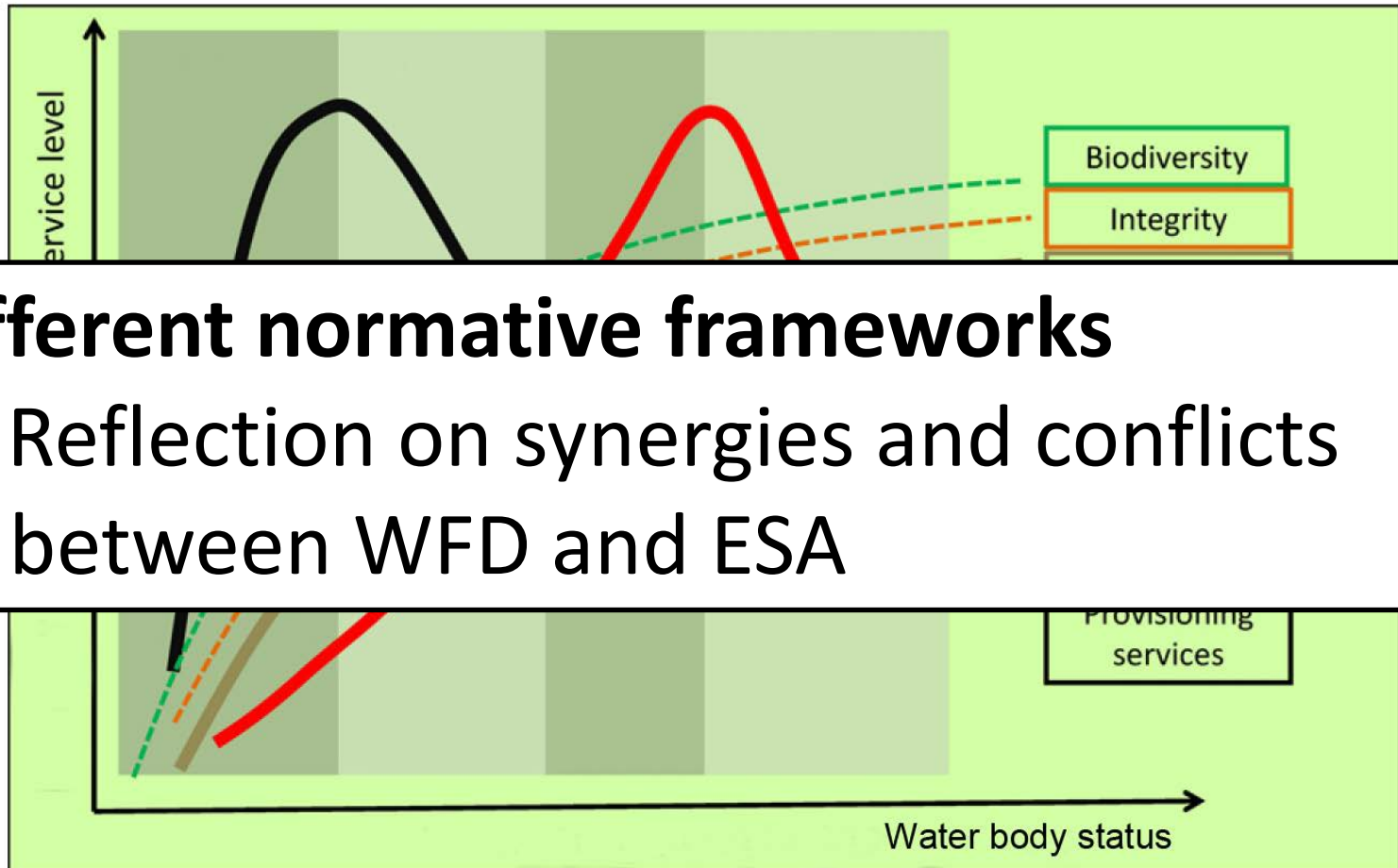
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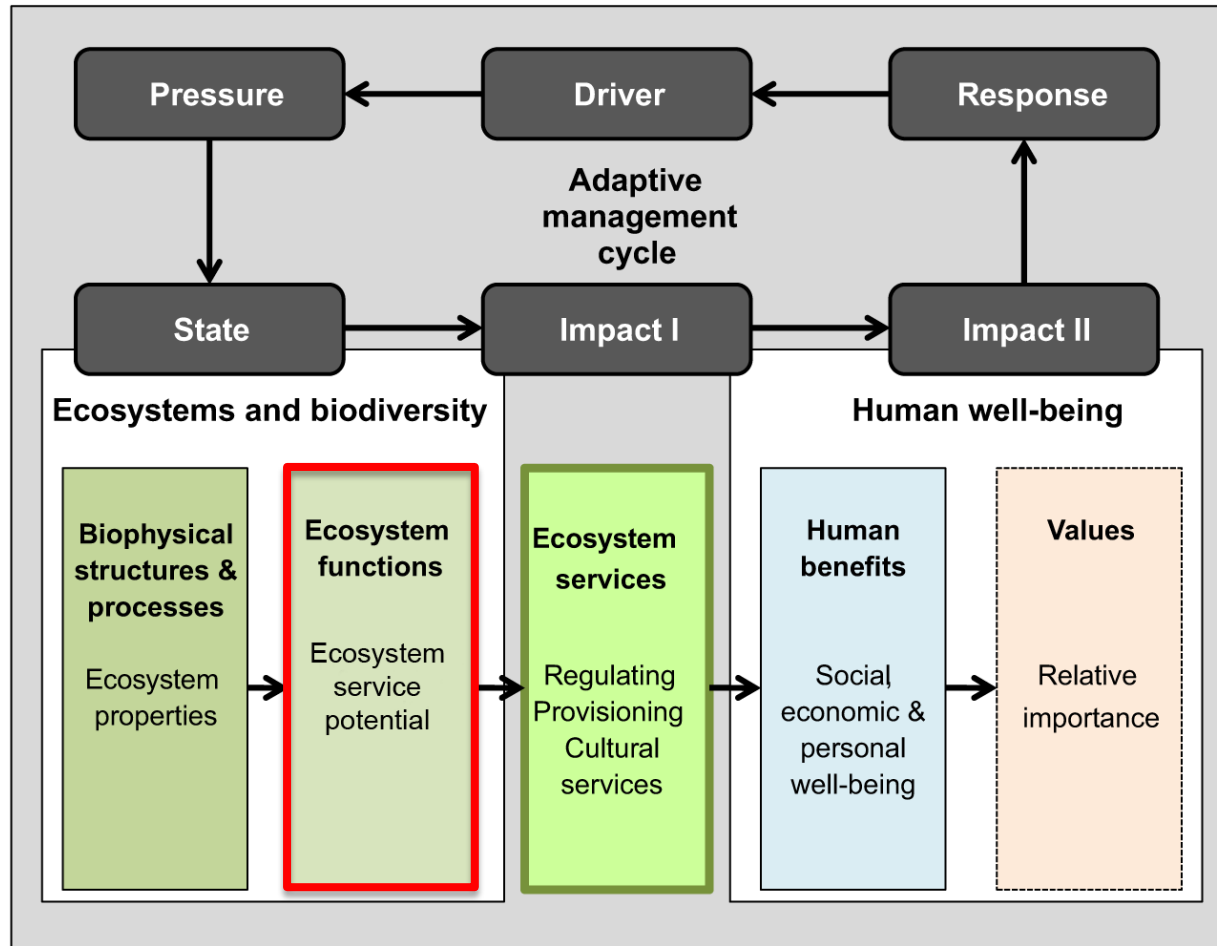


Different normative frameworks

→ Reflection on synergies and conflicts between WFD and ESA

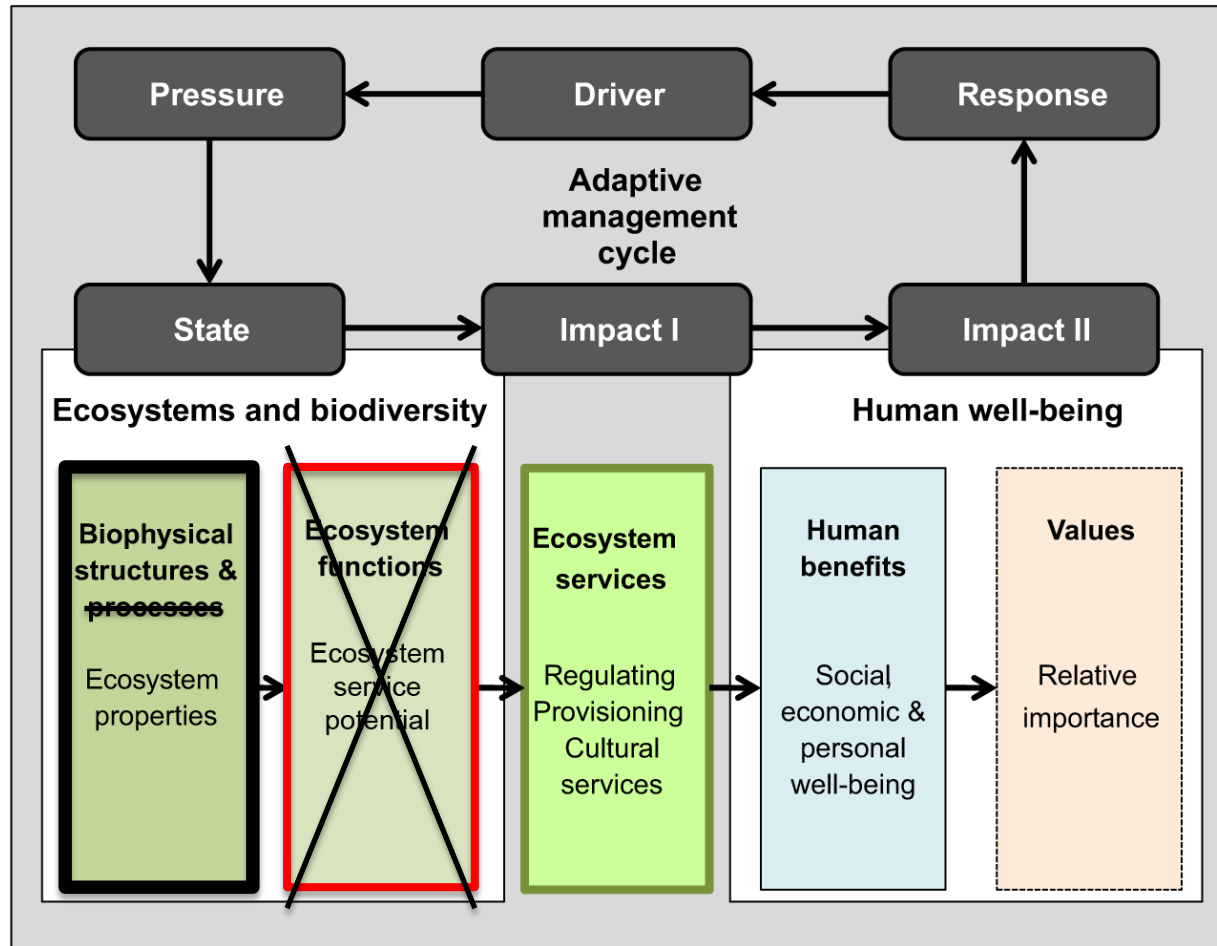
Hypothetical relationship between water body status and service provision (Kandziora et al. 2013; modified)

Practice: Measuring services using WFD?



Placing ecosystem services into the *DPSIR* adaptive management cycle (Müller & Burkhard 2012; modified)

Practice: Measuring services using WFD?



**WFD
Indicators**

Placing ecosystem services into the *DPSIR* adaptive management cycle (Müller & Burkhard 2012; modified)

Summary

(Shortcomings and challenges)

- *Missing link*: Indicators of ecosystem functions measuring ESS capacity
- WFD's status indicators do not address ecosystem services *per se* – valid proxies?
- Conceptual differences between ESA and WFD to be considered:
Good ecological status (GES) ≠ Sustainable service provision
How much service can be tapped ensuring GES?