Implementation of the European Water Framework Directive: What does taking an ecosystems services-based approach add?

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Water Framework Directive

- Step-change in European approach to water management
- Integration of water policies, economic instruments & public engagement
- Focus on good ecological status (GES) – more systemic approach
- Implemented through River Basin Management Plan Cycle (RBMP)
  - State of the system
  - Pressures on the system
  - Actions to be taken
- Ambition yet to be fulfilled:
  - Many water bodies still at risk
  - Managing a system is difficult
  - Socio-economics adds complexity
Ecosystems services-based approach

Levels of adherence

- Comprehensive or limited to specific dimensions
- Specific or generic; based on measurement or modelling
- Levels of interdisciplinary integration; static or dynamic adaptive; consultation or co-construction
- Quantitative or qualitative; monetary or non-monetary

Core elements

- Core element 1: effects on human wellbeing
- Core element 2: bio-physical underpinning of service delivery
- Core element 3: transdisciplinarity
- Core element 4: assessment of services for decision-making
Bringing them together

• Helps us understand why environmental protection matters – well-being & biophysical underpinnings
• Draws attention to wider range of stakeholders - transdisciplinarity
• Helps with trade-off and synergy analyses – decision making

Select and engage stakeholders

Identify Outcomes and Set Objectives

Select and Implement Measures

Assess Disproportionality

Monitor Ecosystem Services and Evaluate approach

Characterise Catchment Ecosystem Services
Implementing the WFD...

Stakeholders

• Fundamental and relevant to every stage
• Draws attention to those who benefit from water (e.g. water recreationalists) and those who conserve, not pollute, water env.
• Moves debate away from environmental to ecological economics including more room for social justice and human well-being objectives

Characterisation

• Adds a new dimension to WFD characterisation of pressures and impacts
• Opens up debate on values beyond single monetary metrics
• Helps move to a more systemic understanding through linking function, services and benefits
• Increases of the visibility of land-water interfaces
Implementing the WFD...

Setting objectives

- Potentially could widen objectives from narrow focus on return to ecological reference conditions to retaining or improving current benefits provided by existing ecosystem
- Opens up debate about the vision and purpose of the water environment
- Might provide route to better align WFD objectives with other policies

Measures

- Reinforces the need to involve local knowledge in option appraisal
- Widens basis of Cost-effectiveness analysis from measures for GES to providing existing and potential range of services
- Could help with voluntary measures e.g. payments for ecosystem services in individual catchments
Implementing the WFD...

**Disproportionality**

- Improve cost-benefit analysis through making less tangible benefits more visible
- Including ‘wider’ benefits may shift results of cost-benefit calculations
- Could help to make visible the affordability and opportunity costs of choices
- Could help to draw attention to the distribution of costs and benefits across water users

**Monitoring & Evaluation**

- Expands WFD monitoring from environmental parameters to services, values and use of the services
- Stimulates new methods and indicators for services and benefits, which may support spatial planning decision-making
- Delivery of principles such as improved decision making and transdisciplinarity should also be evaluated
Challenges:

• Involving stakeholders is not a quick fix – will make decision making more complex and controversies visible
  Is shift from GES is possible under current legislation?
• Valuation is a contested process – debates over methods, data requirements and the morality of monetising nature
• Draws attention to spatial mis-matches in bio-physical, cultural and institutional boundaries in space
• Often a lack of data & methods to represent the full range of ES; and a single map may hide multiple perceptions
• Stimulates consideration of changes over time but often lack data or modelling to assess these
• Procedural and substantive changes will increase the need for resources when implementing agencies face austerity cuts
Benefits:

• Rescue WFD from its technocratic tendencies and restore its focus on sustainability and societal benefits
• Locates WFD in a global framework and dialogue linking natural capital to human well-being
• Strengthens the WFD focus on systems not individual parameters
• Can help connect people to their water environments and build an appreciation for the need to protect and restore our water bodies
• Overcoming the challenges may stimulate greater interest in spatial planning (collaboration, integration & engagement)
Key Messages

• We are still learning how to do this - for 3rd cycle of RBMP
• Can help with some of the problems encountered in 1st cycle
  • Widen and deepen stakeholder engagement
  • Attention to the benefits that aquatic ecosystems provide
  • Enhance the role of economic instruments in decisions
• But it is challenging
  • Requires a systemic, transdisciplinary approach
  • Valuation is difficult and expensive
  • Reconciling space and time needs new data and methods
• Can deliver sustainability, integration and subsidiarity
• Can show how GES is linked to societal goals
• Requires all core elements to be implemented
Thanks!

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