

Valuing freshwater ecosystem services



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ECORISK

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- Objective:
 - To demonstrate value of biodiversity loss from a social and economic perspective in context of Environmental Liability Directive
- ELD applies to:
 - Protected habitats and species
 - Water bodies
 - Contamination of land (health).
- Valuation could inform compensatory remediation
 - Last option in the hierarchy.
 - HD allows for only in IROPI situations and then requiring “no net loss”.
 - ELD providing guidance on value for HEA where is human interest.
 - Potential value for biodiversity offsetting or banking
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Focus on water (freshwater and transitional)

- Damage which affects quality status (WFD)
- WFD aims for full cost recovery in relation to protection of water quality.
- Recognises water is a scarce resource and that its price should reflect this.
- Therefore use should be allocated to those activities with highest social value.

- Not the situation at present:
 - Household water use was not priced. New charge anticipated c€0.63/1000 litres
 - Commercial charges €1.42 for supply and €1.23 for waste water.
- True value much greater
 - Value of water for drinking much higher. Even demand for consistent supply suggests a price 50% higher.
 - Value of water for industry varies from <€1/1000 litres for food industry to €157/1000 litres for refining, but not closely related to consumptive use.

Identify ecosystem service value of water

- Price should be based on cost of maintaining water quality through full pricing of water services – supply, potable water, waste water treatment.
- Still not equivalent to the *value* of water:
 - Assimilative capacity
 - Value of enviro quality inc amenity .
 - Commercial fishing.
- Problems with each:
 - Assimilative capacity is limited.
 - Value of health is high, but purification of drinking water is low cost.
 - Loss of potential angling and fishing value, but other factors including mismanagement, river obstructions, habitat, external factors.
- Lack of information for enviro valuation.
 - Cost of purification/treatment is a minimum value
 - Most angling surveys based on expenditure
 - Survey based valuation of amenity subject to public's limited understanding of ecology.

Research needs

- Identify sources of key knowledge in Ireland and elsewhere (eco functions)
- But ecological studies based on impacts. Ecological functions (changes in and interactions) not always understood.
- Information to estimate marginal value of ecosystem services based on eco funcs.
- Volunteers for a workshop ?

