



ESManage

Incorporation of **Ecosystem Services Values** in the
Integrated **Management** of Irish Freshwater
Resources

STAKEHOLDER WORKSHOP 31st August 2015



Workshop Objectives

1. Introduce the project objectives

2. Seek stakeholder's view on

(i) what are the key ecosystem services delivered by freshwater ecosystems in Ireland and

(ii) how alternative future land-use and other pressures, and management responses might impact the delivery of freshwater ecosystem services.



Workshop Agenda



| Time | Speaker |
|--------------|---|
| 9:30-9:50 | Registration, Tea & Coffee |
| 9:50-10.00 | EPA 2014-2020 EPA Research Strategy – Dr Alice Wemaere (EPA) |
| 10:00-10.15 | Welcome & introduction to the ESManage Project - Dr Mary Kelly-Quinn (UCD) |
| 10:15- 11.00 | Keynote: The Ecosystem Services Approach - Dr Isabelle Durance (Cardiff University) |
| 11.00- 11:20 | Irish Freshwater Resources - Dr Hugh Feeley (UCD) |
| 11:20 -12.30 | Break-out small group sessions – Identifying key Ecosystem Services delivered by freshwater ecosystems in Ireland |
| 12:30-13:00 | Reports from session rapporteurs |
| 13:00-14:00 | Lunch |
| 14:00-14.45 | Keynote: ES valuation: Keys Steps and Information Needs – Prof. Mike Christie (Blue Island Consulting Ltd) |
| 14.45-15.00 | Pressures on Irish Freshwater Resources: Present & Future – Mr Martin McGarrigle (EPA – retired) |
| 15.00-16.00 | Break-out small group sessions – Management Scenarios for Investigation and Study Catchments |
| 16:00-16:30 | Reports from session rapporteurs |
| 16.30-16.45 | Wrap Up and Next Steps – Prof. Michael Bruen |
| 16.45 | Close of Workshop |



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ESManage Team



- ***Project Coordinator***
- Dr Mary Kelly-Quinn – *University College Dublin*

- ***Co-investigators:***
- Prof. Michael Bruen – *University College Dublin*
- Prof. Mike Christie – *Blue Island Consulting Ltd*
- Dr Craig Bullock – *University College Dublin*
- Dr Hugh Feeley – *University College Dublin*
- Dr Fiona Kelly – *Inland Fisheries Ireland*
- Ms. Ewa Siwicka – *Blue Island Consulting Ltd*



Overall Objective



Harness the knowledge and tools required to embed **the ecosystem services approach** into policy and decision-making for sustainable management of water resources, as required by the Water Framework Directive.

Ecosystem Services: ‘the benefits humans derive from ecosystems’

Ecosystem Services Approach: *a way of understanding the complex relationship between nature and humans to support decision-making with the aim of reversing the declining status of ecosystems and ensuring sustainable use/management/conservation of resources*

From: Water Ecosystem Services by J. Martin-Ortega, R. Ferrier, I.J.Gordon & S. Khan.



NATURAL CAPITAL

Ecosystem & biodiversity

Biophysical structure or process

e.g. river channel habitat / instream primary production



Functions

e.g. instream biodiversity mediated nutrient uptake



Ecosystem Services

e.g. clean/clear water



Social/Human Capital

Benefits

e.g. drinking water



Value

e.g. willingness to pay for clean potable water

Human well-being

*Adapted from: Haines-Young et al. 2007; The Ecosystem Concept and the Identification of Ecosystem Goods and Services in the English Policy Context—A Review Paper. Defra, London



Σ Pressures

e.g. abstraction, climate, land-use practices/change

Governance & management policy action to limit pressures



ESManage – 6 Specific Objectives

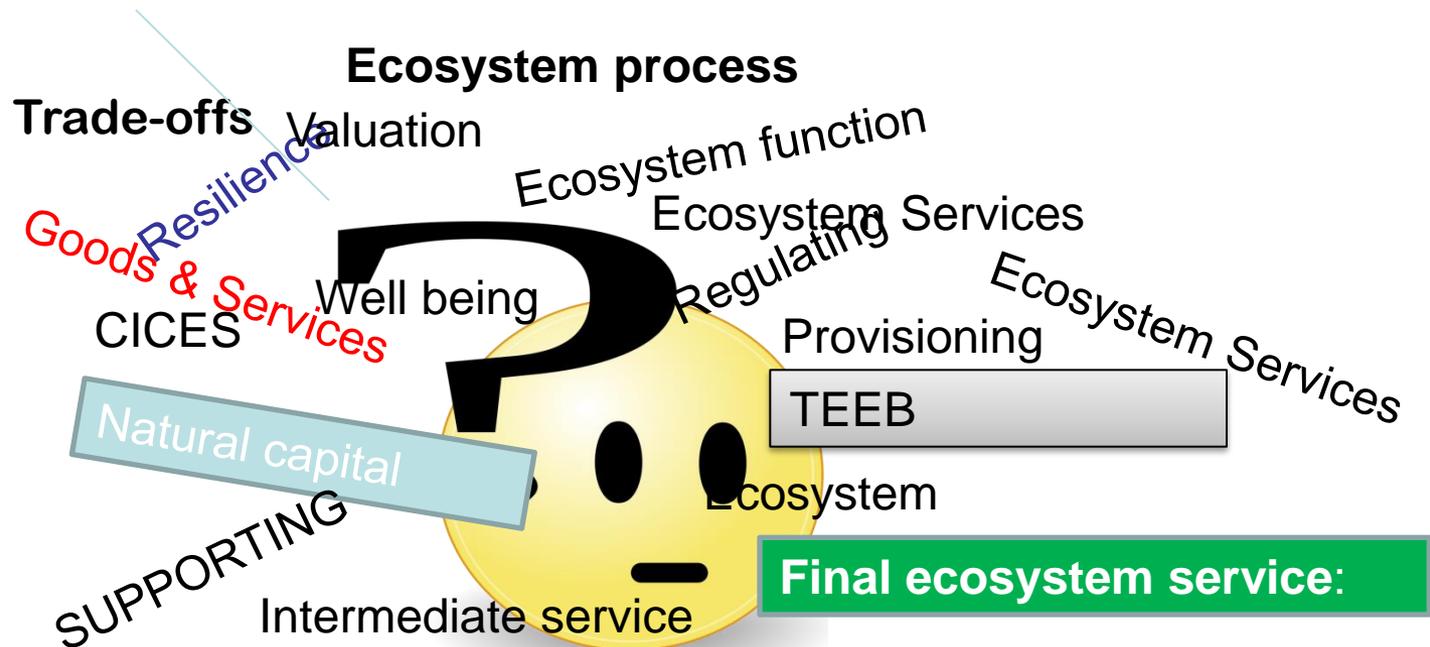
Approach of ESManage

- Analysis of existing data/information
- Generation of new results
- Consultation with stakeholders



Specific Objectives

1. Review literature on the concept of ecosystem services in the context of freshwaters and provision of water-related services (**WP 1**) – **also produce non-technical synopsis**

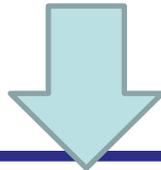
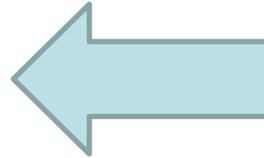


2. Provide a synthesis of current knowledge on the Irish freshwaters in the context of ecosystem services (**WP 2**)

- Freshwater resource capital
- Ecosystem services derived
- Stakeholders
- Pressures (present & future) on physico-chemical conditions and biological components with particular reference to those issues that compromise ecosystem services delivery
- Data sources (in particular potential ES indicators)
- Knowledge gaps

3. Identify, simulate and analyse the most important and feasible water resources management scenarios from the perspective of physical/chemical water quality and combine these with the linkages to ecosystem conditions developed in WP4 (**WP3**)

4. Advance understanding of the links between pressures/drivers and biological degradation that may impact on ecosystem services delivery (**WP4**)



5. Estimate the economic impact of future changes to the provision of key aquatic ecosystem services in Irish rivers (**WP5**)

6. Recommend how the ecosystem services approach can best be embedded into policy and decision-making for sustainable management of water resources (**WP6**)

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