



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



Newsletter compiled by Hugh Feeley (hugh.feeley@ucd.ie)

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ESManage News

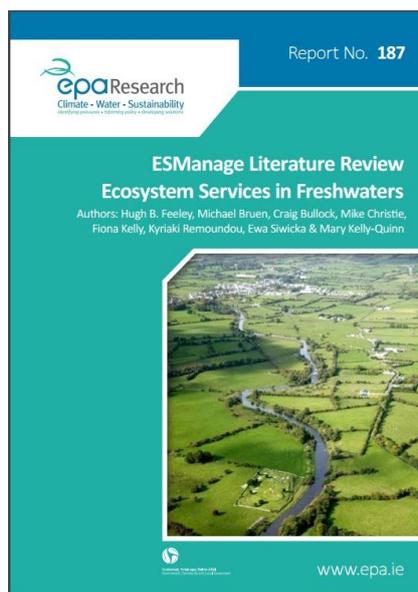
The **ESManage** project is well into its second year. This is the third project newsletter (issues 1 and 2 available [here](#)). We are progressing well and have achieved several key milestones over the past six months. The rest of this newsletter will outline our project progress to date and will provide information on some upcoming outputs and events in the forthcoming six months.

ESManage Literature Review: Ecosystem Services in freshwaters

Authors:

Hugh B. Feeley, Michael Bruen, Craig Bullock, Mike Christie, Fiona Kelly, Kyriaki Remoundou, Ewa Siwicka and Mary Kelly-Quinn

The Environmental Protection Agency recently published our review of ecosystem services in freshwaters (pictured above) which is available for download [here](#). The review considers how the ecosystem services framework aligns with the objectives of current policy and legislation relating to management of freshwater resources. This is a technical report and comprehensively details how freshwaters provide ecosystem services and goods and benefits for human societies.



Topics covered in the report include:

- I. *Introduction to the ecosystem services framework*
- II. *The ecosystem and provision of services*
- III. *Links with biodiversity*
- IV. *Information requirements at various scales*
- V. *Final beneficiaries*
- VI. *Valuation of ecosystem services & benefits*
- VII. *Stakeholders and the participatory approach*
- VIII. *The role of ecosystem services within the legislative & policy framework*



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Click [here](#) for more details on the ESManage Team

Multi-Criteria Decision Analysis and Ecosystems Services

In July this year, Prof. Michael Bruen and *ESManage* Ph.D. student Thibault Hallouin (pictured below) attended the **8th International Congress on Environmental Modelling and Software** in Toulouse, France and hosted the session entitled 'Integrated Modelling for Ecosystems Services Valuation'. This session explored approaches to link ecosystems modelling with policy using a multi-criteria formulation to map ecological model outputs with the valuations and criteria required by policy makers and environmental managers. The overall goal of the session was to bring together scientists interested in ecosystem services with multi-criteria decision support experts in the expectation that very useful synergies would be developed. It is hoped that this, in turn, would encourage and facilitate the use of ecosystems modelling in environmental decision making based on multi-criteria decision analysis. This session was a success and the *ESManage* team was approached to participate at ACES (A Community on Ecosystem Services) 2016 conference in Florida, USA this November ([details here](#)).



A short paper, led by Thibault Hallouin (pictured), on multi-criteria decision analysis and ecosystems services entitled 'Multi-Criteria Decision Analysis and Ecosystems Services: Knowledge Gaps and Challenges for Policy and Decision-Making' was recently published to coincide with the iEMSs conference and is available to read and download [here](#). For more details of the iEMSs conference sessions (*ESManage* hosted session A6) click [here](#).

Coming Soon from *ESManage*

The *ESManage* project will be producing two further reports in the coming months. Both of these will be published by the Environmental Protection Agency. Here is an outline of what is to come:

Freshwater Ecosystem Services: An introduction for stakeholders

Authors:

Hugh B. Feeley, Michael Bruen, Craig Bullock, Mike Christie, Fiona Kelly, Kyriaki Remoundou, Ewa Siwicka and Mary Kelly-Quinn

This report is a shorter, more concise synopsis of the larger and more comprehensive review outlined on Page 1, tailored to non-scientific stakeholders and the general public. Topics covered include:

- I. What are ecosystems, ecosystem services and the ecosystem services framework?
- II. Understanding ecosystem services
- III. Freshwater ecosystems and ecosystem services
- IV. The role of biodiversity in ecosystem service delivery
- V. Valuation of freshwater ecosystem services and benefits
- VI. Stakeholder importance, involvement and perceptions
- VII. How can ecosystem services be used in management and policy?

Stay tuned to our [website](#) and [twitter](#) for updates

Irish Freshwater Resources and Assessment of Ecosystem Services Provision

Authors:

Hugh B. Feeley, Michael Bruen, Craig Bullock, Mike Christie, Fiona Kelly and Mary Kelly-Quinn

This is the second major project output (see page 1 for the first) that will soon be available to all *ESManage* stakeholders. This report summarises the freshwater

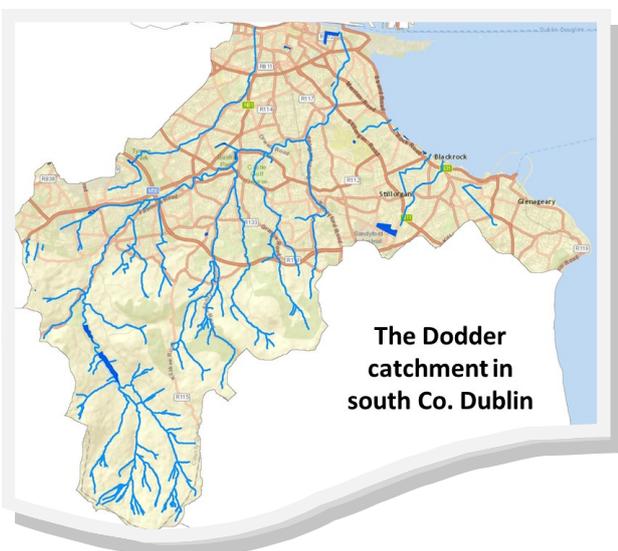
ecosystems found in Ireland and the biological resources living within them. More importantly this report outlines in detail the freshwater ecosystem services found in Ireland, their importance, future sustainability and likely responses to management options. The list of topics covered include:

- I. An introduction to freshwater ecosystem services
- II. Freshwater ecosystem resources in Ireland
- III. The biological resources of Irish freshwater
- IV. Current status of Irish freshwaters
- V. Management of Irish freshwaters
- VI. Identification of ecosystem services in Irish freshwaters—importance and management

Stay tuned to our [website](#) and [twitter](#) for updates

ESManage Ecosystem Service Valuation Workshops

In July the **ESManage** Project held three stakeholder workshops, one in each of our study catchments: Milltown, Co. Dublin—Dodder catchment, Carrick-on-Suir, Co. Tipperary—Suir catchment and Ballina, Co. Mayo—Moy catchment (see Newsletter 2 [here](#) for more details). These preliminary workshops aimed to introduce the concept of ecosystem services and garner an understanding of stakeholder perceptions and knowledge. A key goal of the workshops was to give the **ESManage** team a better understanding of how stakeholders interact with, and benefit from, Irish rivers. All three workshops were reasonably well attended and the **ESManage** team would like to thank all stakeholders who participated. In 2017, **ESManage**



will hold more workshops to further develop the relative importance of ecosystem services to citizens and under take valuation exercises. For more information and updates on future workshops please keep an eye on our [website](#) and [twitter](#) account.



Professor Mike Christy of Blue Island Consulting explaining the concept of ecosystem services to stakeholders in Dublin last July.

2016 — A Busy Year So Far for the ESManage Team

This year the **ESManage** team has been actively involved in promoting the ecosystem services concept and explaining how the approach can be used to understand the goods and benefits society receives from nature. A list of presentations and talks made by team members are highlighted below:

- * **Hugh Feeley** made an oral presentation on ecosystem services and the ESManage Project at ENVIRON 2016 at the University of Limerick in March 2016.
- * **Mary Kelly-Quinn** made an oral presentation on the objectives and approach of the ESManage Project to the Irish Forum on Natural Capital in Trinity College Dublin on April 19th 2016. More information on the Forum on Natural Capital can be found [here](#).
- * **Michael Bruen** hosted a special session at the iEMSs 2016 conference last July in Toulouse, France. A description of the session is given on Page 2.
- * **Thibault Hallouin** made an oral presentation on multi-criteria decision analysis and ecosystems services at IEMSS conference, Toulouse, France. More information is available on Page 2.

- * **Hugh Feeley** made an oral presentation at SIL (International Society of Limnology) congress in August 2016 in Turin, Italy. More information can be found [here](#).
- * **Craig Bullock** presented the ESManage Project and it's approaches at European Ecosystem Services 2016 conference in Antwerp, Belgium, September 2016. More information can be found [here](#).

Future ESManage presentations:

- * **Mary Kelly-Quinn** will make a keynote presentation to the IWA international conference in Dublin, held at Dublin City University in late October entitled: 'The ecosystem services framework in water resources management - opportunities and challenges'. More information can be found [here](#).
- * **Hugh Feeley** will give a talk at the inaugural Irish Ecological Association conference in Sligo this November. More information can be found [here](#).



Dr Hugh Feeley speaking at the ENVIRON Conference in the University of Limerick in March earlier this year

ESManage is a 3-year project (February 2015 to January 2018), funded by the Irish Environmental Protection Agency. The overall project objective is to ***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 (WFD).***

Project Partners



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