

Best Natural History Presentation at Environ 2021

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Integration of ecosystem services and natural capital within the Irish policy landscape

The past century has brought remarkable improvements to human health and wellbeing. At the same time, environmental degradation—from biodiversity loss to climate change— threatens the life-supporting functions that nature provides to us for free. One reason for this is many of nature's benefits are invisible or silent to decision-making processes. To remedy this, the **ecosystem service** framework and **natural capital** approach have emerged to give voice to all of nature's benefits and aid environmental decision-making.

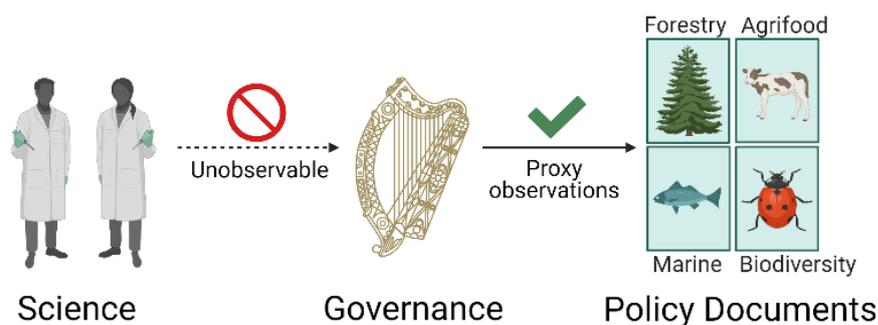


Fig 1: The science-policy transition of new concepts is impossible to observe directly. Instead, proxies can be used such as use within published documents (made with Biorender).

These academic concepts must transition across the science-policy interface to resolve environmental problems and create positive change. One mechanism for this is via public policy and reporting. While these terms are embedded in international discourse, control of environmental management falls at the national level. This study is the first to ask how have these concepts become integrated within Irish policy and reporting.

To investigate this knowledge gap, we used content analysis on a sample of 50 policy documents and reports published by Irish governmental bodies from 1996–2020. Data collection focused on two levels: the explicit use of ecosystem service and natural capital language, and the descriptions of ecosystem services within the text.

Methods: Content Analysis

6 Policy Types, 50 Policy Documents, 1996-2020

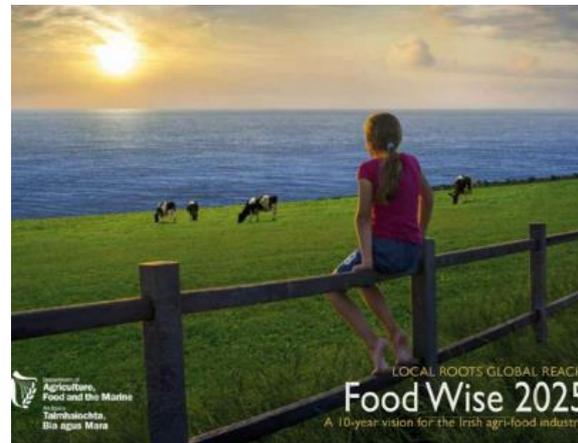
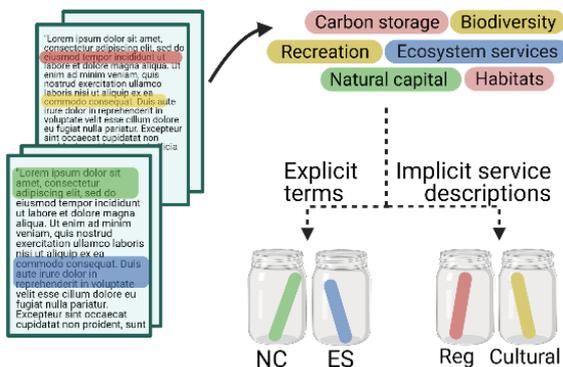


Fig.2: Schematic showing process of content analysis (left) and an example policy document used as a data source – agri-food strategy Foodwise 2025 (right).

Results showed that ecosystem service and natural capital terminology were embedded in Irish policy and reporting beginning in 2008 but were unequal between document types. Biodiversity and environment reports contained over 70% of uses compared to very low integration in agricultural planning and reports. Similarly, while a range of different services were described across the entire sample, the service profile of individual documents differed. The overall conceptual integration of the ecosystem service framework is fragmented and incomplete and this limits the potential for future ecosystem service knowledge to aid decision-making in Ireland. Addressing these gaps through further mainstreaming and capacity building is required in Ireland to meet environmental obligations.