Best Social Engagement Presentation at Environ 2024

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Assigning recreational value to a specific coastal ecosystem in a travel cost modelling context

The single-site travel cost model is a method typically used to estimate the recreational value of open-access natural areas. However, when utilised at sites where multiple ecosystem types are present, the proportion of value that is generated by each ecosystem can be unclear. Natural capital accounting frameworks such as the UN's SEEA-EA require values that are ecosystem-specific, as per IUCN classification. Therefore, recreational values from single-site travel cost model may be difficult to incorporate. In this study, we value a protected coastal site using single-site travel cost model and demonstrate ways to assign a proportion of the total site value to one of the ecosystems at the site, saltmarsh.

The study site is North Bull Island, Co. Dublin, an open-access recreational site that includes a beach, sand dunes and a saltmarsh. This research focuses on estimating the recreational use value for saltmarsh in particular. Saltmarsh is an important Blue Carbon ecosystem, and provides many ecosystem services such as coastal protection and contribution to fisheries. However, little is known about the recreational use value of saltmarsh, especially in Ireland. Surveys were collected on site in May and June of 2023. Information about trip and travel behaviour was used to model the recreational use value of the site. Respondents were asked questions about saltmarsh that were used to weight this value to assign a proportion to the saltmarsh.

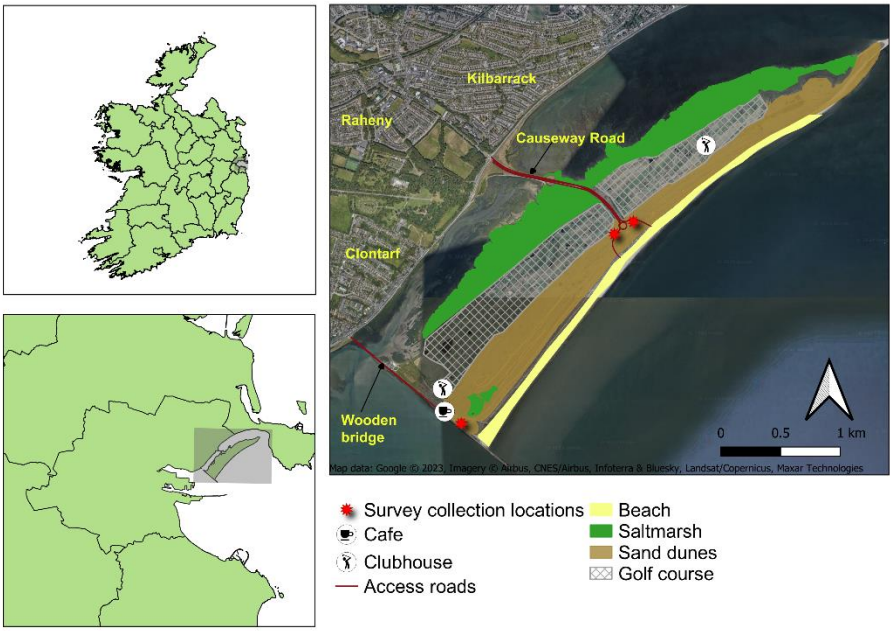

Figure 1: North Bull Island, Co. Dublin. Study site

While the value of one trip is estimated to be €2.92, an estimated 1.4 million visits are made to the site each year, which results in an aggregate use value of €4.09 million. The aggregate annual saltmarsh specific value ranged from €280,154 to €1.7 million. We found that while visitors did not frequently access the saltmarsh, they may have found it important for other reasons.

Understanding the value of our coastal ecosystem services is vital to “maximise” their value through sustainable management. These results can be applicable in natural capital accounting frameworks such as the SEEA-EA, but can also help inform local management decisions about site use.

This PhD research is part of the BlueC project, more details of this project are available at https://www.bluec.ie/

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