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Further Reading: Norton, D. and Hynes, S., 2018. Estimating the Benefits of the Marine Strategy Framework Directive in Atlantic Member States: A Spatial Value Transfer Approach. *Ecological Economics*, 151, pp.82-94.

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A Spatial Value Transfer Approach to Estimating the Benefits of the MSFD in the North East Atlantic

The environmental pillar of the EU's Integrated Maritime Policy that supports sustainable 'blue growth' is manifested through the EU Marine Strategy Framework Directive (MSFD). The MSFD aims to achieve and maintain good environmental status of all EU marine waters by 2020. A healthy and productive marine environment provides a variety of ecosystem goods and services that in turn generate benefits for society.

While some of the benefits generated by a healthy and productive marine environment are valued by the markets (e.g. sustainable and safe to eat fish and aquaculture), others such as biodiversity, cleaner beaches or less polluted waters for recreation have no market prices.

In order to value these non-market benefits a variety of primary valuation techniques may be used. However, these techniques may be costly or time consuming. An alternative is to use a secondary valuation technique known as value transfer. Akin to an auctioneer estimating the value of a house by 'transferring' the value of similar houses to it, many policy-makers use value transfer to various degrees of complexity. This research used both primary and secondary valuation techniques to estimate the benefits of a healthy and productive marine environment in the North East Atlantic.

Research Findings

The authors carried out a survey on 812 members of the Irish public to estimate their willingness to pay (WTP) for a healthy and productive marine environment in Irish marine waters. The average WTP per person was €29.92 but this varied across the population depending on income, attitudes and location.

The authors used this variation across the population to estimate a model which was then transferred to other EU member states in the North East Atlantic region. This form of functional value transfer included spatial elements. The research found that these spatial elements had a significant effect on the estimated value of the transferred values with total estimates for a healthy and productive marine environment in the North East Atlantic region varying between €2.4 billion and €3.6 billion.

Policy Implications

The EU MSFD is an important tool in achieving a healthy and productive marine environment across the EU but trade-offs may have to be made. Many of the benefits of healthy and productive marine environment are not captured by the markets but nonetheless have value. Using non-market valuation techniques as demonstrated here helps decision makers in their attempts at balancing the costs and benefits of achieving a healthy and productive marine environment. However, this research also revealed some of the complexities of using value transfer to estimate non-market welfare benefits particularly when values vary by location. While cheaper and relatively quicker than primary valuation techniques, this research highlights that care must be taken when using such transfer techniques.