

An economic valuation of Marine Biodiversity: a multi-case contingent study

Adriana Ressurreição⁽¹⁾; James Gibbons⁽²⁾; Gareth Edwards-Jones⁽²⁾, Tomaz Ponce Dentinho⁽³⁾; Michel Kaiser⁽⁴⁾; Ricardo Santos⁽¹⁾; Tomasz Zarzycki⁽⁵⁾, Charlotte Bentley⁽⁴⁾, Daryl Burdon⁽⁶⁾, Jonathan Atkins⁽⁷⁾, Stephen Mangi⁽⁸⁾, Melanie Austen⁽⁸⁾

⁽¹⁾ Department of Oceanography and Fisheries, University of Azores; Horta - Portugal

⁽²⁾ School of the Environment & Natural Resources, Bangor University; UK

⁽³⁾ Department of Agrarian Sciences, University of Azores; Angra do Heroísmo – Portugal

⁽⁴⁾ School of Ocean Science, Bangor University; UK

⁽⁵⁾ Institute of Oceanography, University of Gdansk; Poland

⁽⁶⁾ Institute of Estuarine & Coastal Studies, University of Hull; UK

⁽⁷⁾ Centre for Economic Policy, The Business School, University of Hull; UK

⁽⁸⁾ Plymouth Marine Laboratory; UK

Economic studies exploring the value of marine systems are far less common than those on terrestrial systems. This difference is puzzling as there is no *a priori* reason to suspect that marine systems are less in need of valuation or in any way less valuable. Moreover, economic valuations based on benefits people place on marine biodiversity provide useful information that can be integrated into the decision-making process, promoting sustainable management of systems whose integrity is highly threatened. Here, we report the results of a contingent study undertaken at four case-study sites spread across three European countries: Azores islands (Portugal), Gulf of Gdansk (Poland), Isles of Scillies and Flamborough Head (UK). The study considered the value of species richness of five specific marine taxa (mammals, fish, algae, birds and invertebrates), and all marine taxa, as proxies of marine biodiversity. Respondents were asked to value the prevention of either a 10% or 25% decrease from the current level. Results, based on 1732 face-to-face interviews, indicated that across all studies there was a greater willingness to pay for all marine taxa compared with any individual marine taxon group. Small differences occurred in the willingness to pay among different taxa (mammals and fish were valued more highly than birds, invertebrates and algae), and although these differences were significant, they were much lower than *a priori* expectations. These results throw doubts on the commonly held premise that charismatic/utilitarian taxa have a disproportionately strong influence on the willingness to pay and provide further insights into human preferences for biodiversity conservation.

Corresponding Author: Adriana Ressurreição (aressurreicao@uac.pt)