

## **Economic valuation of species loss in the open sea**

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### **Abstract**

Although oceans cover 70% of the planet relatively few studies have considered the economic valuation of marine biodiversity. This is unfortunate as decisions relevant to marine management and conservation require such information. This study uses a contingent valuation method to estimate the public's willingness to pay (WTP) to avoid loss in the number of marine species in the waters around the Azores archipelago, in the central Atlantic. It estimated the marginal value associated with increased levels of species loss, and also estimated WTP to avoid species losses in different marine taxa amongst residents and visitors. A face to face survey was undertaken in order to obtain valuations for 10% and 25% decreases in the species richness of five marine taxa individually (mammals, fish, algae, birds and invertebrates) and all marine species as a whole. Results suggest small differences in the willingness to pay to prevent losses in the different taxa (mammals and fish were valued more highly than birds, invertebrates and algae). While these differences were statistically significant, they were lower than a priori expectations. Results also suggested a greater willingness to pay to preserve all marine taxa as a whole than for the sum of the individual marine taxa. These results may be influenced by the maritime culture of many of the respondents, but despite this they question the commonly held premise that charismatic/utilitarian taxa have a disproportionately strong influence on the willingness to pay, and they provide further insights into human preferences for biodiversity conservation.

**Key words:** Marine biodiversity; conservation; WTP; Azores