

How should biodiversity be presented in valuation studies?

Fatemeh Bakhtiari¹, Thomas Hedemark Lundhede¹, Jette Bredahl Jacobsen¹, Niels Strange¹ and James Michael Gibbons²

¹*University of Copenhagen, Denmark*

²*Bangor University, UK*

Abstract

Embedding and scope effects play a crucial role in the validity of stated preference outcomes, often arising from imprecise presentations of environmental goods such as biodiversity. Qualitative evidence shows that people tend to think of biodiversity in terms of its role in the ecosystem function such as stability and resilience, yet many studies focus solely on quantitative measures of biodiversity such as the number of species. This may induce a contextual embedding bias that is valuation measures that capture less of the good in question than intended. We report a split sample choice experiment (CE) study in which willingness to pay (WTP) for biodiversity was evaluated in two different embedding contexts: one version where biodiversity was presented as the number of species and one where we also included an attribute, fully correlated with the biodiversity attribute describing the role of biodiversity in ecosystems. By comparing WTP across splits and subgroups constructed based on follow-up questions, we were able to distinguish embedding from information effects and investigate scope sensitivity of respondents in each split as well. We found WTP for biodiversity to differ significantly between different splits and groups. We conclude that using a measure such as the number of species may under estimate people's valuation of biodiversity as it does not capture the public perception of biodiversity function. Furthermore, we found that adding a description of the role of biodiversity in ecosystem explicitly in the choice set improved sensitivity to scope.

Biography

Fatemeh Bakhtiari have a joint Ph.D. degree in Environmental economics from University of Copenhagen and University of Bangor (UK) which focused on ecosystem service valuation and General public's environmental Behavior toward biodiversity conservation to generate a better and more comprehensive information base for policy formulation and decision making procedures. For the last 3 years, she has been a part of the basic Danish research center "Centre for Macroecology, evolution and climate change" (CMEC). Since 2015 she is working as a researcher at Technical University of Denmark which has collaboration with UNEP. Her recent focus is quantification and valuation of sustainable development co-benefits of mitigation actions.

fba@ifro.ku.dk