



Bringing social values into the economic value of water biodiversity

New research has integrated individual motivations and beliefs into the economic valuation of biodiversity. The study surveyed members of the public about a river biodiversity improvement project in the UK, and indicated that willingness to pay for this initiative depended on attitudes and ethical beliefs, as well as consequences of the measure.

There is a growing trend in legislation to consider the economic value of biodiversity and a popular method to assess this is using people's willingness to pay (WTP) for an initiative that improves biodiversity. These economic models tend to focus on the consequences or the impacts of the projects, neglecting the social context and the motivations of respondents.

The study, funded by the EU ADVISOR project¹, introduced factors from ethics and social psychology into an economic model of human behaviour. It identified key elements in the human valuation of the environment that are missing from economic explanations:

- Ethical beliefs about the need to protect biodiversity or nature
- Attitudes towards paying to improve biodiversity and its effectiveness
- Subjective norms or the perceived social pressure to pay
- The degree of perceived behavioural control over payment and over the improvement of biodiversity through payment

The research applied the model of environmental valuation to a proposed initiative in the River Tay in Scotland that aims to protect endangered species by changing the river flow. This would reduce the amount of electricity derived from hydro-electric power, which would increase the price of electricity for consumers. The researchers conducted over 1000 face-to-face interviews to investigate the public's willingness to pay higher electricity prices.

The results suggest that multiple values, beliefs and motives are influential in people's valuation of biodiversity and these should be considered in management decisions in order to ensure projects and initiatives are successful.

27 per cent of those surveyed indicated a positive willingness to pay whilst 43 per cent were not willing to pay at all. The rest refused to answer or did not know. The results indicated that over 40 per cent of those who were willing to pay did so on the basis of ethical beliefs that biodiversity has a 'right' to be protected, rather than just the positive impacts of the project.

Social norms were influential on people's WTP in terms of beliefs about expectations from family, colleagues and environmental groups. People's perception of control over payment, in terms of affordability and choice of electricity supplier, was also related to their WTP. However, perceived control over the impact of the payment on biodiversity did not influence their WTP.

1. ADVISOR (Integrated Evaluation for Sustainable River Basin Governance) was supported by the European Commission under the Fifth Framework Programme. See: www.dcea.fct.unl.pt/cense/projects/advvisor/project.htm

Source: Spash, C.L., Urama, K., Burton, R. *et al.* (2009). Motives behind willingness to pay for improving biodiversity in a water ecosystem: Economics, ethics and social psychology. *Ecological Economics*. 68:955-964.

Contact: clive.spash@umb.no

Theme(s): Biodiversity, Environmental economics