Agriculture and forestry activities increase the deposition of fine sediments in river and streambeds, with negative consequences for biodiversity and stream ecosystem functioning. However, little is known about the economic value of headwater stream restoration and the associated improvement in ecosystem services. Here, we apply the contingent valuation method to assess the awareness, knowledge, and values held by different stakeholder groups regarding a change in the set of ecosystem services related to the restoration of sediment-stressed forest streams in a large boreal catchment.

The majority of respondents (69%) place positive value on restoration. A multiple bound discrete choice (MBDC) format is applied and sensitivity analysis is carried out on willingness to pay (WTP) values with respect to preference uncertainty. Preference uncertainty related to willingness to support and pay for a forest stream restoration program is estimated and compared with ordered probit and non-parametric WTP models. According to our study, only 15% of the more than 450 respondents with a positive WTP are completely certain about their preferences. Higher preference certainty is significantly correlated with, for example, the stated easiness in revealing the household’s WTP, trust in the restoration program, and support for the restoration of the living conditions of trout, in addition to a lower education level. Making restoration benefits more visible and involving the public and stakeholders in the projects could help in setting restoration targets, creating more effective plans with better public and stakeholder support, and establishing a stronger basis for the funding of restoration efforts.

Keywords
- Stream restoration; Contingent valuation Boreal forests Preference uncertainty Ecosystem services Rural area

Publication Date:
Friday, 17 February 2017

Full reference:

Link to DOI:
http://dx.doi.org/10.1016/j.wre.2017.02.004


Links