

Valuing economic benefits of water's ecosystem services with non-market valuation methods and regional input-output model



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Abstract

Colorado has the highest trout angler participation rate in the United States, but the economic benefits of the state's anglers were last estimated more than two decades ago. Using survey data sampled in Colorado's stocked public reservoirs in 2009, Chapter one showed that trout anglers' net economic benefits were more than twice as much as non-trout anglers'. Values estimated from Travel Cost Method produced angler day consumer surpluses of US\$191.60 and \$61.68 for trout and non-trout anglers respectively. Values from Contingent Valuation Method are \$196.48 (trout) and \$73.84 (non-trout) for ...

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Date Issued

2011

Format

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society. The use of water in a production process can be determined using the residual imputation approach. This is a form of a budget analysis technique that seeks to find the maximum return attributable to the use of water by calculating the total returns to production and subtracting all non-water related expenses. Often ES valuation and Payment for Ecosystem Services (PES) only relate to a single service. As Kosoy and Corbera [25] indicate, the valuation exercises of single ecosystem functions are often misleading because their search for marginal values may have no real meaning, particularly when the critical question is how to protect the resilience of ecosystems [26]. The authors warn that favoring the production of one ES may have detrimental effects on many others (see also [27]). As all the previous valuation methods discussed are time consuming and expensive to complete, evaluation techniques that rely on existing knowledge rather than empirical research to inform decisions are gaining acceptance (Brouwer et al., 2003). Valuing the economic benefits from increasing natural capital stocks can inform policy and provide insight into the value of management in resource and environmental systems. Discover the world's research. 17+ million members. We present a valuation approach for water quality-related services that is sensitive to different actions that affect water quality, identifies aquatic endpoints where the consequences of changing water quality on human well-being are realized, and recognizes the unique groups of beneficiaries affected by those changes. Five ecosystem services that could be restored along a 45-mile section of the Platte river were described to respondents using a building block approach developed by an interdisciplinary team.