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Evaluating an ecosystem service provided by Atlantic salmon, sea trout and other fish species in the River Spey, Scotland: The economic impact of recreational rod fisheries

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Abstract

In 2003 a study was undertaken in the River Spey catchment, north-east Scotland, to estimate the economic impact of recreational rod fisheries for Atlantic salmon (*Salmo salar*), brown and sea trout (*S. trutta*), pike (*Esox lucius*), and non-native rainbow trout (*Oncorhynchus mykiss*). Thirty-one fishery owners and 372 anglers completed questionnaire surveys on average catches and angler effort in 1998–2002. Anglers reported their daily expenditure, and the CogentSI model was used to derive multiplier effects. Total annual angler days were 54,746, of which 74% were from salmon and sea trout anglers. Angler expenditure was estimated to be £11.8 million annum⁻¹, of which £10.8 million was generated by salmon and sea trout anglers. Accounting for multiplier effects, fisheries contributed £12.6 million annum⁻¹ to household incomes and 420 full time equivalent (FTE) jobs in the catchment. Of this, salmon and sea trout fisheries contributed £11.6 million annum⁻¹ and 401 FTEs. On average rod caught salmon and sea trout contributed approximately £970 fish⁻¹ to household incomes, equating to £26 smolt⁻¹ and £1 m⁻² annum⁻¹ for riverine nursery habitat. The capital value of the salmon and sea trout rod fishery was £56.7 million. Comparison with a national survey of angler expenditure in 2003 suggests that the relative impact of salmon and sea trout in the Spey catchment's economy is one of the highest in the country. The application of angler expenditure as an evaluation of utilitarian ecosystem services provided by fish species and freshwater habitat is discussed.

Keywords

Angler expenditure; Fishing effort; Freshwater habitat value; Smolts; Tourism; Utilitarian value