



Assessing the contribution of recreational sea angling to the English economy



Annette Roberts^{a,*}, Max Munday^{a,1}, Neil Roche^{a,1}, Adam Brown^{b,2}, Mike Armstrong^{c,3},
Jodie Hargreaves^{d,4}, Sarah Pilgrim-Morrison^{d,4}, Kevin Williamson^{d,4}, Kieran Hyder^{c,3}

^a Cardiff Business School, Cardiff University, Cardiff CF10 3EU, UK

^b Substance, Fourways House, 57 Hilton Street, Manchester M1 2EJ, UK

^c Centre for Environment, Fisheries & Aquaculture Science, Pakefield Road, Lowestoft, Suffolk NR33 0HT, UK

^d Marine Management Organisation, 9, Millbank, c/o 17 Smith Square, London SW1P 3JR, UK

ARTICLE INFO

Keywords:

Recreational sea angling
Economic impact
Input-output analysis
English economy
Evidence-based policy

ABSTRACT

Sea angling has been shown to be a high value activity with significant expenditure by individuals on their sport. Deriving estimates of the economic contribution of recreational sea angling is important in a number of related policy contexts, from tourism management and economic development policy, to the sustainable management of inshore fish stocks. This paper reveals some of the challenges in understanding the economic effects associated with recreational sea angling, and provides estimates of the economic value of recreational sea angling in England. The results were derived from research undertaken in England in 2011–13, which was conducted as part a wide ranging government-funded study, *Sea Angling 2012*, that estimated sea angler catches, spending and activity. Recreational sea angling made a significant contribution to the economy, supporting just over £2 billion of total spending, and 23,600 jobs in England in 2012–13. The implications of these results are discussed in the context of the management of recreational sea angling in England.

1. Introduction

Recreational sea angling⁵ is a major pastime in many developed and lesser developed countries [3]. Recent estimates of recreational fishing in Europe have found that there are 8.7 million sea fishers, a 1.6% participation rate [4]. Related to this activity, sea anglers spend significant sums of money on their sport, impacting on local and national economies, with direct expenditure estimated to be 5.7 billion euro each year [4]. The significance of the activity should be understood not just in terms of this direct spending of recreational sea anglers but also the activities that are supported by this spending. For example, across the EU it has been estimated that there are close to three thousand companies, manufacturers and wholesalers trading in recreational angling tackle, and that these firms support an estimated 60,000 jobs [5].

In consequence changes in the level and nature of sea angling

activity undertaken, perhaps leveraged by changes in the nature of stocks, catch limits, or policy could have important economic effects [6,7]. An understanding of the economic activity supported by recreational sea angling should then be one contextual element of marine resource policy in terms of management of the stock as well as the organisation and development of the angling sector. In this respect interventions around fisheries stock management should include not only managing the competing demands placed on different species, but also the economic and social features of fisheries (see also Hyder et al., [8]). In addition to addressing conservation goals, future co-management of European fish stocks for recreational and commercial purposes should consider how to maximize the economic and social values of the different fisheries [8]. Clearly policy needs to be developed with some understanding of the requirements of both recreational and commercial fishing, with a knowledge of the different economic effects levered by

* Corresponding author.

E-mail address: robertsa1@cardiff.ac.uk (A. Roberts).

¹ www.cardiff.ac.uk/business-school.

² www.substance.net.

³ www.cefas.co.uk.

⁴ www.gov.uk/government/organisations/marine-management-organisation.

⁵ Recreational fishing has been defined by the ICES Working Group for Recreational Fishing Surveys as: “The capture or attempted capture of living aquatic resources mainly for leisure and / or personal consumption. This covers active fishing methods including line, spear, and hand-gathering and passive fishing methods including nets, traps, pots, and set-lines” and angling as “Fishing with hand-lines, fishing rods and/or poles using baits and/or lures” [1], section 6. Issues relating to the definition and scope of recreational sea angling, the motivation for this activity (such as challenge, relaxation, social activity) and a contrast with commercial fishing are fully discussed in Pawson et al., [2].

each activity (see Southwick Associates [9] for a comparison of economic impacts of recreational and commercial fishing in the United States). Understanding the economic value of sea angling is also important in developing policies to develop outdoor recreation-based tourism policies to enhance the economic value of it in what are often economically disadvantaged, small or remote rural communities [10].

While economic data and analysis on the contribution of sea angling for coastal, regional and national economies is an important input to evidence-based fisheries management policy, this paper suggests that the collection of such information is complicated by a series of factors. Establishing the population of sea anglers is difficult, as in many countries, no license or permit is required to participate in sea angling [2]. It is also difficult to separate sea angling from freshwater angling, and with significant cross overs between them where anglers may participate in a number of different types of angling at different times [11]. Sea angling also entails a very wide spectrum of different activities in terms of location, method and target species [12,1].

Notwithstanding these difficulties, information on the economic activity supported by sea angling, particularly when combined with data on behaviours and motivations of anglers, can 'lead to a deeper understanding of how alternative management actions can affect the fish stock, anglers, and coastal communities' [13], p. 6. For example, a UK context for this paper are the current limits on bass catches for both recreational and commercial anglers [14]. Whilst several measures have been implemented across Europe to reduce bass mortality, stocks have continued to decline with a zero take fishery proposed in the latest advice [15]. A further context is the ongoing international issues relating to the relative balance of effects of controlling fish stocks through commercial quotas and/or through recreational catch limits, and the introduction or expansions of 'no-take' zones and the promotion of recreational fisheries (e.g. USA saltwater recreational fisheries policy, [16]). In each of these cases, an appreciation of the value of the marine resource to recreational anglers and the wider local and national economies is relevant. Moreover, where catch limits lead to changes in the pattern of sea angling spending, and changes in the incidence of trips and angler effort, there are expected to be a series of indirect economic consequences [7].

Recreational fisheries have impacts on stocks with 27% of sea bass and western Baltic cod catches taken by recreational fishers [4]. However, a lack of recreational catch data has led to exclusion of recreational fisheries from stock assessment, which may affect the ability to manage fish stocks sustainably [8]. The European Commission introduced a Data Collection Framework (DCF) to support the Common Fisheries Policy (CFP) [17] that included estimation of recreational catches and releases for selected species (see for example EU [18]). In addition, the control regulations include reporting of recreational catches by vessels [19]. These all relate to catches and releases, but there is no requirement to provide economic information on recreational fisheries.

1.1. UK recreational sea angling valuation

Several UK studies examine the economic activity supported by recreational sea angling. Studies vary in coverage with some focussing on direct spending and economic activity indirectly supported by this spending (e.g. Armstrong et al., [20]; Monkman et al., [21]) and others focussed more on value and the monetary value linked to the personal utility gained from participation in sea angling (e.g. Drew Associates, [22]). A series of representative studies are outlined here to reveal some of the estimation problems that research has faced and to review the methods used. Importantly some of the most important contextual studies in terms of the development of methodology involve freshwater fishing.

Drew Associates [22] examined the economic contribution of sea-angling in England and Wales. This study used the *Household Omnibus Survey* to estimate the total population of sea anglers, and to examine

their socio-economic characteristics, and the type and frequency of angling. This information was then supplemented by surveys of sea anglers and suppliers to anglers. By comparing the spending of anglers with what they were willing to pay, the study estimated the personal consumer surplus benefits of angling, which were scaled up for the estimated total population. The study found that estimated total expenditure by (resident in England and Wales) sea-anglers was £538 m per year from 12.7 million angler days of activity. This spending was estimated to support nearly 19,000 jobs directly and £71 m of supplier income. In a similar vein Simpson and Mawle [23] examined participation in both fresh water and sea angling in England and Wales. In similarity to Drew Associates [22] omnibus surveys gauged participation rates in the population. For sea angling specifically this study revealed that 6% of the population of England and Wales had sea-fished in the 2 years preceding the study, which yielded an estimated sea angling participation of 2.8 million people.

A series of studies have sought to examine regional differentials in sea angling activity. For example, Nautilus [24] examined the economic contribution of sea-angling in the South West of England. This study estimated 240,900 resident sea-anglers in the target region, with 600,000 visitor anglers, converting to 750,000 angling days. Nautilus did not calculate any indirect or induced effects, but they did estimate the net economic value of angling 'in the form of sea anglers' surplus to be £77 m per annum'.

Radford et al. [25] estimated the economic impact of sea angling in Scotland and examined the scale of direct as well as indirect and induced effects associated with direct spending. The study reported numbers of local and visiting anglers by type (shore, private and charter boats), target species and angler expenditure, and an estimate of the economic impact of sea angling to regional incomes and employment was made. Once again use was made of an omnibus survey. This study revealed that in 2009 sea angling in Scotland supported 3148 full time job equivalent (FTEs) jobs, and £70 m annually of Scottish household income. The study argued that a cessation of sea angling would lead to a net loss of at least 1675 FTEs and annual income loss of £37 m.

The review reveals few studies of the economic contribution of recreational sea angling in England and the UK following Drew Associates [22]. It is likely that there have been significant economic and demographic changes within angling since then. In addition the methods used in Drew Associates [22] focused on angling-specific supplier chains to the exclusion of angler expenditure estimates. This analysis also focused on angling club members, and more frequent anglers. The wider stakeholder and business survey elements of some studies have also been limited. For instance whilst Radford [25] included a stakeholder survey, it was far from an exhaustive appraisal. Utilising available data of all angling related businesses, as well as including angler spending data with non-angling businesses can provide more accurate estimates of economic value and employment, more localised impact estimates (especially in areas of deprivation) as well as the required inventory. More generally the review suggests a need for survey approaches to be flexible to explore the complexity of angler types and resulting different sets of expenditure patterns. In addition, more recent and widespread use of email and internet technology now enables the use of online networks of anglers – including those supported by angling governing bodies, online press as well as independent forums - from which to draw part of the survey sample (although it is recognised that each contain bias).

Until recently few studies have focused on the social benefits of sea angling. However, some recent research has highlighted the specific benefits associated with sea angling, not least in identifying forms of angling that may involve higher rates of physical activity [26] and a range of associated social activities [27,28]. While this paper focuses on tangible economic outcomes and valuation, the method used enabled some analysis of the social contribution to be undertaken. Comment on this aspect is included later in this paper. In this respect understanding the social value of activities such as angling – in quantitative, monetised

Download English Version:

<https://daneshyari.com/en/article/5118076>

Download Persian Version:

<https://daneshyari.com/article/5118076>

[Daneshyari.com](https://daneshyari.com)