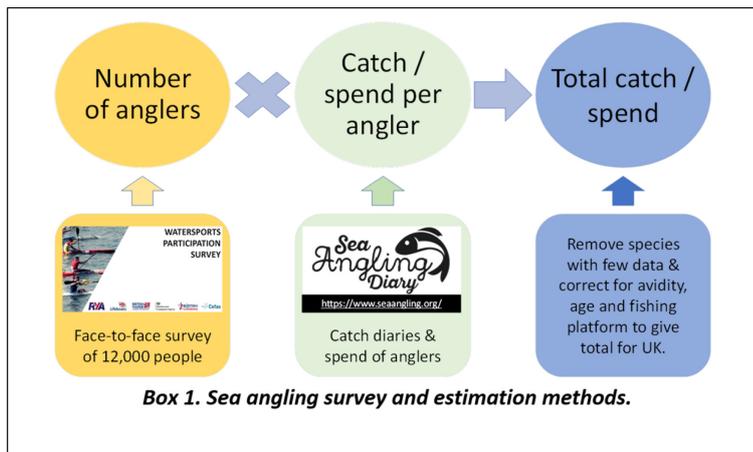


Recreational Sea Angling in the UK in 2016 & 2017



Sea angling is a popular activity in the UK that has social and economic benefits, and catches can be significant. Data on participation, catch and economic value of sea angling are needed by government and stakeholders to support well-informed decisions and sustainable management of fisheries. As part of our statutory monitoring obligations to Europe, the UK must report annual catches of recreational sea fishing. Following from “Sea Angling 2012” survey

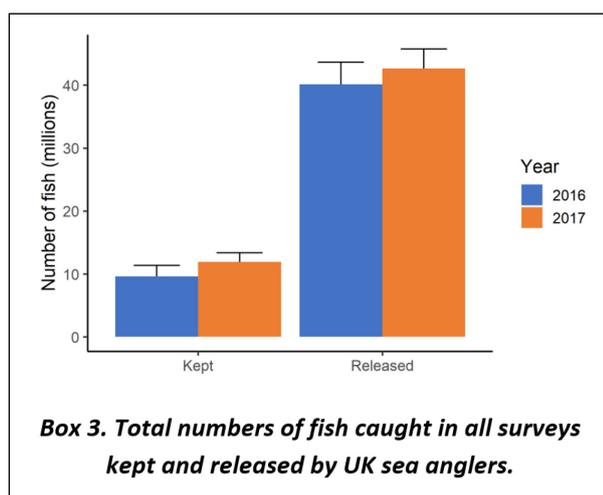
in England, a revised monitoring programme with new methods was tested in 2015 and expanded in 2016 and 2017 to estimate numbers of UK sea anglers, how often they fish, what they catch and how much they spend on their sport (Box 1).

To obtain these estimates, the outputs from two separate survey methods were combined. Firstly, an existing survey of 12000 UK residents (Watersports Participation Survey - WPS) was extended to estimate fishing effort in terms of how many people went recreational sea fishing, and the number of days on which they fished from the shore or from different types of boats. On average, 823000 UK residents aged 16 years or older went sea angling in the years 2015 -2017, representing a participation rate of 1.6%, and in total they fished on 7.0 million days (Box 2). Numbers of sea anglers were greatest in England, and within England were largest in the South West. The participation rates and days fished for Wales, Scotland and Northern Ireland were uncertain due to small numbers of sea anglers interviewed in these regions.

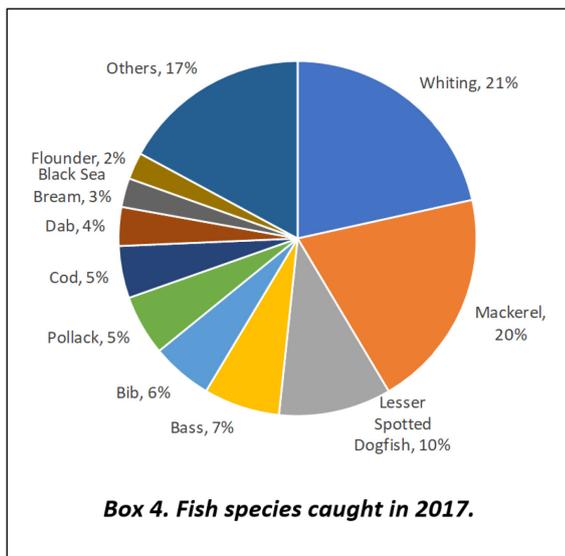
Measure	Number of sea anglers	%	Days
UK	823	1.6	7.0
England	607	1.4	4.6
Wales	72	2.8	0.8
Scotland	81	1.8	0.7
Northern Ireland	67	4.4	0.9

Box 2. Average number of participants of 16+ years (thousands), participation rate (%) & days fished (millions) by UK sea anglers from 2015-17.

The second of the two annual surveys was designed to estimate the average catch per day by sea anglers each year. A nationwide panel of sea anglers was recruited to complete a diary recording all their marine recreational angling activities, catches and spend during the year (www.seaangling.org). A total of 476 diarists in 2016 and 1 495 in 2017 signed up, but not all provided the minimum of six months of data needed for them to be included in the analysis. In 2016, 292 anglers meeting this threshold caught 45874 fish from 3824 day-sessions, and 639 anglers caught 76510 fish from 7353 sessions in 2017.



The outputs from the WPS survey and diary panel were combined to estimate total UK catches, after



correcting for differences in frequency of fishing (avidity), age, and type of fishing (shore, boat) between the diary sample and the UK WPS sample. In total, 100 different fish species were caught by sea anglers in the UK in 2016 and 2017. Sufficient data were available to provide raised estimates of total UK numbers caught for 68 individual species and tonnage for 32 species. For the 68 species raised, the total number of fish kept and released for the whole UK was 49.7 million in 2016 and 54.5 million in 2017 (Box 3) with release rates of 80%. The species composition of the catch was similar in 2016 and 2017, and the four most common species were whiting, mackerel, dogfish, and bass (Box 4).

At intervals in the year, diarists provided data on expenditure on capital (major) items and a breakdown of spend on their most recent sea angling day trip, allowing estimation of the total economic impact and jobs supported by sea angling in the UK. The total expenditure estimate per adult anglers in the UK was £1108 in 2016 and £1318 in 2017 (Box 5). Removing imports and taxes and scaling to the UK gave total direct expenditure estimates of £696 million in 2016 and £847 million in 2017. This resulted in a total economic impact of sea angling in 2016 of £1.58 billion, providing £326 million of Gross Value Added (GVA) and supporting almost 13600 jobs. Total economic impact in 2017 was £1.94 billion, providing £388 million of GVA and supporting around 16300 jobs in 2017. These were slightly lower than the estimates for England in 2012 probably due a combination of differences in allocation between industries, taxes, and survey method.

Catch estimates for England from the 2016 and 2017 surveys were higher across many species than from the Sea Angling 2012 survey programme, particularly for released fish. It was not possible to use an on-site approach in 2016-17 due to resource constraints. Instead an angler diary panel was implemented that was both resource efficient and has been used to provide robust catch estimates in other countries. As the 2012 data are for only one year and used different survey methods, it has not been possible to determine the extent to which the increased catch estimates are due to survey bias, random sampling error, or changes in fish abundance. It is likely that a combination of these factors generated the differences. Although a method was applied to reweight the panel to be more representative of the population in terms of avidity, age or predominant sea angling method, some bias may remain if sea anglers who complete a diary are on average more experienced or skilled than the general population, and this might affect their catches and expenditure. Further work is underway in 2019 to assess the level of bias including a validation survey and correcting for fishing experience and skill.

Measure	2012	2016	2017
Expenditure per angler:			
• Trip (£)	£633	£675	£901
• Capital (£)	£761	£772	£841
• Total (£)	£1394	£1447	£1742
Total expenditure (£M)	£1233	£1108	£1318
Direct impact:			
• Expenditure (£M)	£831	£696	£847
• Jobs (thousands)	10.4	7.7	8.9
• GVA (£M)	£357	£326	£388
Total economic impact:			
• Expenditure (£M)	£2097	£1577	£1936
• Jobs (thousands)	23.6	13.6	16.3

Box 5. Economic impact of sea angling (£M is million pounds; 2012 England & 2016-17 UK).