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RECREATIONAL ANGLING MONTHLY ACTIVITY SURVEY

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This report has been accepted for publication by the Institute, which does not itself take institutional policy positions. The report has been peer reviewed prior to publication. The authors are solely responsible for the content and the views expressed.

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CHAPTER 1

Introduction

In 2016, the ESRI Angler Research Panel was established to collect data on recreational angling, including anglers' activities and views. In the absence of a national register of anglers and thereby the means to easily collect data on angling activity, the Angler Research Panel is a practical alternative for collecting quantitative data on angling topics. The ESRI uses data collected from panel members to inform its research on the socio-economics of inland fisheries within Ireland, with the objective of providing evidence that will support policy decisions regarding the management of fisheries resources and angling within Ireland. The ESRI's research programme on the socio-economics of inland fisheries is funded by Inland Fisheries Ireland. Since 2016, angler panel members have been invited to participate in surveys examining aspects of trout, pike and salmon angling, including views on conservation measures. Prior publications associated with the research programme on the socio-economics of inland fisheries are listed in Appendix 1.

In September 2017, the ESRI Angler Research Panel initiated a monthly angler survey, collecting information on fishing trip frequency, target species, catch and angling expenditures, among other subjects. Prior to this monthly survey, the only detailed data available on angler activity in Ireland regarding topics such as trip frequency, catch and associated expenditures comprised a handful of once-off surveys. While these earlier surveys collected much useful information, they posed a serious challenge for respondent anglers, who had to precisely recount the number of angling trips they undertook in the prior 12 months, or recall their total angling-related expenditures across the same period. In a monthly survey, the recall period of the prior month is more reasonable; it also allows a greater depth of information in terms of seasonal trends across items such as target species, effort levels and catch. This report represents a summary of the data collected through those monthly surveys and is intended as a resource to both anglers and fishery managers alike.

At present, neither the ESRI Angler Panel nor respondents to the monthly angling activity survey are fully statistically representative of the population of all anglers fishing in Ireland. Angler panel members, and consequently respondents to the monthly survey, are skewed towards more proficient, avid anglers. Consequently, caution should be exercised in extrapolating the results of this report to the population of all anglers. Indeed, without a national register of anglers, there is no means at present to reliably extrapolate the findings. Nonetheless, the survey results do give insight on a core angler cohort. They also provide detailed data on basic issues such as angling effort, catch and expenditure. Data on angling activities

has not been collected previously in a systematic and consistent manner. This monthly angling survey represents the first effort to do so and the survey results are intended as an information resource for decision-makers involved in fishery management, as well as for angler representative bodies, fishing clubs and individual anglers.

The existing monthly angler survey and the ESRI Angler Panel are valuable research resources, providing useful data for fishery management purposes. Chapter 2 provides information on the ESRI Angler Panel as of July 2019. However, there is scope for improvement. Increasing membership of the angler panel to make the surveys more representative of the spectrum of anglers would facilitate easier extrapolation (via sampling weights) of research findings for policy purposes, whether for stock assessment, gauging fishing effort levels or assessing the economic contribution of angling. Recreational angling is a very diverse activity, ranging from anglers that target pike, coarse fish, salmonids and various sea fish species. There is also a wide continuum of anglers in terms of their proficiency and avidity. For this reason, a substantially larger angler panel would facilitate statistically robust research on more focused topics or angler cohorts; for example, sea anglers targeting shark species.

Economic research on recreational angling has a long history. For example, over 50 years ago US fishery economists were studying how catch rates impacted on net economic values of recreational fisheries (Stevens, 1966). North America still plays a leading role in research on the economics of recreational angling, as do the Nordic countries, Australia, Germany and the United Kingdom (UK). Recent developments build on the idea of 'citizen science', where increasingly anglers record diaries related to their fishing activities, often via online platforms, providing data to inform fishery management. The UK is among the countries playing a leading role here, with its Sea Angling Diary, which has parallels with the ESRI Angler Panel but is also a real-time resource for anglers. The UK approach may be a model for future development of the ESRI's angler activity monthly survey. Some features of the UK's Sea Angling Diary are described in Chapter 3.

The data provided in this report would not exist without the support and cooperation of anglers. While we have tried to keep our surveys relatively short in length, nonetheless anglers take time out each month to complete the survey. For that we are truly grateful. A word of appreciation also to the anglers that have been in touch voicing their support for the research programme and offering suggestions for improvement on data collection. On a few occasions, we have revised the monthly survey questionnaire in order to explicitly capture data that anglers felt was not being captured; for example, angling expenditure that occurs in months when no fishing is undertaken, or international angling trips.

The purpose of this report is to provide summary data related to angling effort, frequency, catch, method and expenditure. We will continue to use the data to explore issues around the economic value of angling, resource efficiency and identifying trends in and impacts on angling activity.

1.1 REPORT OUTLINE

Chapter 2 provides descriptive data on the ESRI Angler Panel. Chapter 3 describes the UK Sea Angling Diary. Chapter 4 sets out the main findings from the monthly angler activity survey.

CHAPTER 2

ESRI Angler Panel

Unlike other countries, Ireland has no register of anglers; additionally, a licence is not required to fish with a rod except in the case of salmon and sea trout. Without the sampling frame that such a register would provide, there is no convenient way to collect statistical information related to recreational angling. Consequently, there are no reliable official statistics on the number of recreational anglers, trip frequency or expenditure in Ireland; nor are there figures related to angling as a tourism resource. The ESRI Angler Panel was established as an alternative sampling frame for recreational anglers to enable regular data collection in a cost-effective manner.

Participation in the angler panel is voluntary and open to all anglers, regardless of skill level or frequency of engagement. Members were recruited via a web-page where contact details, target species and county location are recorded. The angler panel itself was publicised via social media, national and local newspapers, including in 'angling news' sections, as well as through local radio interviews, posters in fishing tackle shops, and direct communication with both angling representative bodies and angling clubs. The panel does have a broad distribution of anglers both by geographical location and target species but without a register of anglers there is no means to directly gauge its representativeness of the total population of recreational anglers. However, we can reasonably assume that at present the panel is over-represented by more committed or avid anglers, as they are more likely to frequent the places where the panel was publicised, both online and in other places; they are also more likely to participate on a voluntary basis. Future ambitions for the panel are to both increase the numbers of participant members and to develop sampling weights, so that survey results can be extrapolated to be representative of the wider angling population. Sampling weights correct for over/under sampling of sections of the angler population and development of such weights is an important future project to ensure that survey results are representative of the entire angling population. Comparison of the angler panel with a register of anglers, if one existed, would permit calculation of sampling weights. In the absence of a register, weights can be calculated based on a bespoke survey of the general population eliciting information on target species and avidity, among other factors.

As of July 2019, the ESRI Angler Panel comprised 1,063 members. Members indicate which species they target when joining the panel, details of which are presented in Table 2.1.

TABLE 2.1: ANGLER PANEL MEMBERS BY TARGET SPECIES

Fish	N.
Brown trout	684
Pike	585
Coarse fish	376
Salmon	479
Sea Trout	453
Mackerel	461
Sea Bass	313
Other Sea fish	409

The monthly angler activity survey commenced in September 2017. All panel members were invited to participate. A subset of panel members responded to the invitation, who receive monthly emails requesting them to report their angling activity in the previous month.

Anglers can join the panel and participate in the monthly survey by completing a short registration form at www.esri.ie/angling

CHAPTER 3

The UK Sea Angling Diary

The UK Sea Angling Diary is a collaborative project involving the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and Substance, a research company. The project is funded by the Department of Environment, Food and Rural Affairs in England and by the devolved governments of Scotland, Wales and Northern Ireland. It also has the support of several angling representative organisations.

The diary project commenced in 2016 and serves several purposes. In the first instance, its results help meet reporting obligations on recreational catches as specified by the EU Data Collection Framework and the EU Council Regulation 1224/2009. The EU regulation is intended to aid the International Council for the Exploration of the Seas (ICES) and the EU Scientific, Technical and Economic Committee on Fisheries (STECF) sustainably manage fishery resources. Ireland has similar reporting obligations and in time the ESRI's monthly angling activity survey could contribute to satisfying those obligations. While the UK Sea Angling Diary focuses solely on sea angling, the ESRI's work also includes inland fisheries.

A second and equally important purpose of the UK diary project is to provide information to demonstrate the impact of sea angling. Sea angling not only provides an economic impact; it is also a social and cultural resource. The data help fishery managers, both at national and local level, to make better informed decisions on fisheries management. They also provide the angling community with information to help develop their own views and policies. The ESRI's research programme on the socio-economics of inland fisheries shares these aims. Having data that are as accurate as possible on items such as fishing effort, catch and expenditure will help demonstrate the impact of recreational angling more effectively.

On joining the panel, all participants in the UK's Sea Angling Diary were provided with:

- a fish identification booklet, tape measure and waterproof logbook notebook to record details of location, methods and catches on each session; and
- an explanation of the requirement to record fishing sessions (including location, duration, method and catches) and transcribe this to an online diary system each month.

In May 2019, a mobile app version of the diary tool was launched to make it more convenient to enter information about fishing sessions and catches. This enabled participants to record data 'on the go' – while out fishing – even when they were

not connected to the internet. It also facilitated a more accurate recording of fishing location.

Anglers are asked to record:

- whether they had been fishing in any given month;
- details of fishing sessions including date, location, platform, method, gear and whether or not they had caught fish; and
- details of fish caught (species and length) and fate (kept or released).

As in the Irish survey, UK anglers are asked to actively record whether or not they fished in a given month; this is because an absence of data entry cannot be presumed to mean no fishing effort.

In total, approximately 1,750 people use the UK diary, 400 of whom use the smart phone app since its launch in May 2019. Data collected via the diary is extrapolated to the total population of UK sea anglers using sampling weights based on data from the UK's Watersports Participation Survey.¹ This re-weighting and extrapolation of the Irish survey data has not been possible, due to the absence of a suitable existing sports participation survey and register of anglers. The extrapolation of the Irish survey data to estimate population-wide statistics will require a bespoke angler participation survey.

Cefas expect to publish data for the years 2016 and 2017 shortly. It will then be possible to compare sea angler experiences in Ireland with the four countries of the UK.

¹ The use of sampling weights allows re-weighting of the angler panel data to more closely represent the characteristics of the national population of anglers in terms of avidity (number of fishing trips in the year) and other characteristics that affect catches.

CHAPTER 4

Findings from the monthly angler activity survey

The monthly angler activity survey, which commenced in September 2017, collects information on trip frequency, target species, catch, fishing locations and expenditures regarding the previous month. This report provides summary statistics from the first 22 months of the survey, with the data collated by year to more easily show seasonal trends. The full findings for 2017–2019 are provided in Chapters 5–7, with Chapter 5 presenting data for 2017, Chapter 6 presenting data for 2018 and Chapter 7 presenting data for 2019. Tables within each chapter are numbered by year, with Tables 17.1–17.16 (in Chapter 5) providing data on 2017, for example.

Before proceeding several points of caution are necessary prior to interpreting the data:

- Sample sizes are small, particularly within sub-categories, and therefore averages may be impacted by extreme values. This is particularly relevant for average catch and expenditure statistics in early or late season. For transparency the number of associated anglers is also reported.
- The survey data are unverified angler responses. No adjustments have been made for apparent anomalies, which may have legitimate explanations. For example, reported salmon fishing in October after the season has ended may reflect fishing in Northern Ireland where the season closes at the end of October. Targeting or catching species out of season may reflect either a survey response error or could reflect actual activity. Out of season angling expenditure associated with specific species may reflect purchase of equipment or angling trip reservations. The monthly survey explicitly includes a section for anglers that did not fish during the previous month but who had angling expenditures.
- The data relates to all types of recreational angling, including at stocked/commercial fisheries. Stocked trout fisheries can include both rainbow and brown trout. Catches of brown trout after September 30th or October 12th when wild fishery seasons end likely reflect activity at stocked fisheries.

In this chapter, we briefly discuss key findings from the survey data.

4.1 ANGLER RESPONDENTS AND TARGET SPECIES

The monthly survey commenced in September 2017, with a total of 408 anglers completing the survey (see Table 17.1), of whom 310 had fished during the

previous month. Across the remaining months of 2017, a total of 584 anglers completed the survey on at least one occasion. In 2018, the average monthly number of responses to the survey was 310 (see Table 18.1) with a total of 640 separate anglers participating in the survey. In 2019, responses are slightly lower at an average of 290 per month across 430 separate anglers. The current monthly response rate is approximately 45 per cent.

Tables 17.2, 18.2 and 19.2 show the species angler respondents target. Within each chapter (5–7), Tables ‘X.3’ and ‘X.4’ provide a more detailed breakdown regarding coarse and sea fish target species.² The target species with the highest number of anglers are pike and brown trout, and this reflects strong recruitment into the ESRI Angler Panel associated with a survey that considered pike stock management in designated brown trout fisheries. While the monthly survey has a relatively high number of monthly respondents, averaging approximately 300 per month, the number of respondent anglers that fish in any month is substantially less, with an average of 165 in 2018, as seen in Tables X1. The corresponding number targeting any specific species in any month is consequently lower, at just 30 anglers across all months and target species. However, there is considerable monthly variation, which follows seasonal variation. For example, only a handful of anglers indicated that they target brown trout in the winter months (Tables X.2), but this number rises quite rapidly during spring, reaching a maximum with the ‘Mayfly hatch’. Brown trout angling during the winter months may occur in stocked fisheries. The most popular sea fish target species among our respondents are pollack, cod, coalfish and the ‘flat fishes’ (such as flounder, turbot, dab and sole). Sea angling itself is most likely to take place between May and September (see Tables X.4).

4.2 FISHING SESSIONS

The survey questionnaire asks respondents to report the number of fishing sessions in which they targeted specific species during the prior month. A fishing session is defined as each period of time dedicated solely to fishing. Fishing all day would consist of one fishing session, while an angler that fished both in the morning and evening but left the water during the day is considered to have fished two sessions.

Tables X.5 show the total number of fishing sessions that our angler respondents undertook: 12,940 in 2018, from 640 angler respondents, which is approximately 20 sessions per angler. Tables X.6 present the average number of fishing sessions by target species per month. Brown trout followed by sea bass are the species which the respondent anglers target the most frequently. The relatively high number of fishing sessions per month corroborates the assertion made earlier that

² With ‘X’ here representing the year in question.

the ESRI Angler Panel and consequently the monthly survey is weighted in favour of the more avid angler.

4.3 CATCH

Catch statistics are reported as aggregate catch across all respondent anglers (Tables X.7), average catch per angler per month (Tables X.8) and average catch per session (Tables X.9), all by species and month. Catches are reported in a number of fish, except in the case of coarse fish.³ For coarse fish, two metrics are used: larger fish (in excess of one kilogram or two pounds), are reported in numbers, whereas all coarse fish catch is reported in kilograms based on anglers' best estimates.

Average catch rates are relatively high, which reflects the fact that more avid and proficient anglers are over-represented on the angler panel, with less avid anglers under-represented. Catch per month is substantially higher than catch per session (see Tables X.8). Tables X.9 show multiple sessions across a month. The highest catch rates per session occur in sea fishing, followed by rainbow trout.

Although the angler panel is comprised of more proficient anglers, the average catch rate is low, at one fish or less, for salmon, sea trout and sea bass fishing sessions. In the case of salmon, the average catch per session was 0.7 fish in 2017, 0.3 fish in 2018 and 0.1 in 2019 (at time of writing). That nominally appears to be a dramatic decline but largely reflects higher catches in the latter half of the season, possibly reflecting a late grilse run due to the exceptionally dry summer. The 2017 figures comprise the last months of the season, which includes the grilse run. The 2019 figures only include spring months, whereas the 2018 figures include the entire season.

The catch rates per session are graphed below in Figures 4.1 to 4.3. It is difficult to discern any clear seasonal trends, though this may reflect the short time series of observations spread over 22 months.

³ In the survey, anglers reported their catch by selecting pre-defined categories for fish caught. For catches higher than 10, fish ranges were used; for example, 11–20 fish. For the calculation of the statistics presented here, midpoints of those ranges are used.

FIGURE 4.1 PIKE AND COARSE FISH, CATCH PER SESSION

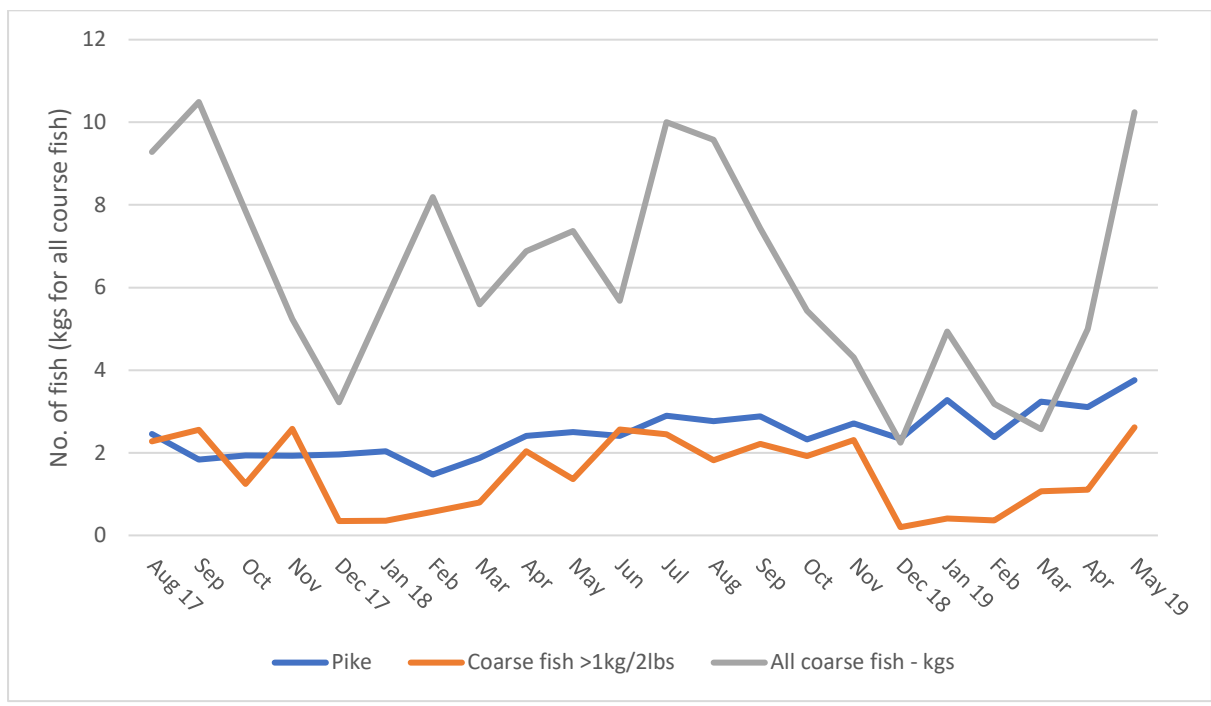
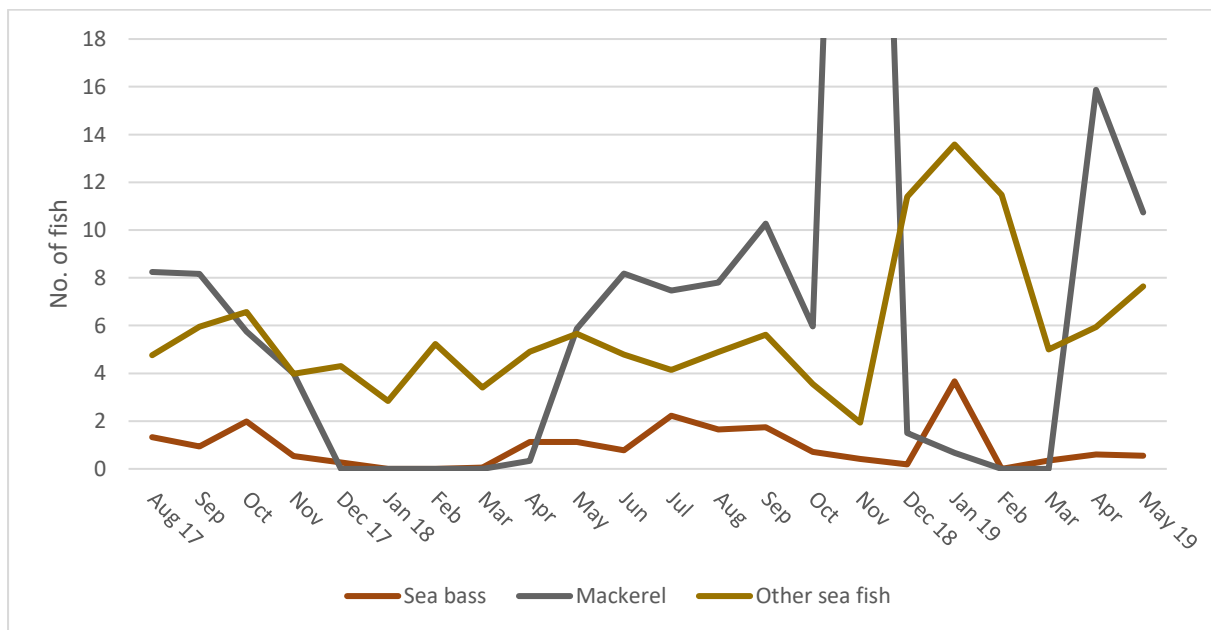
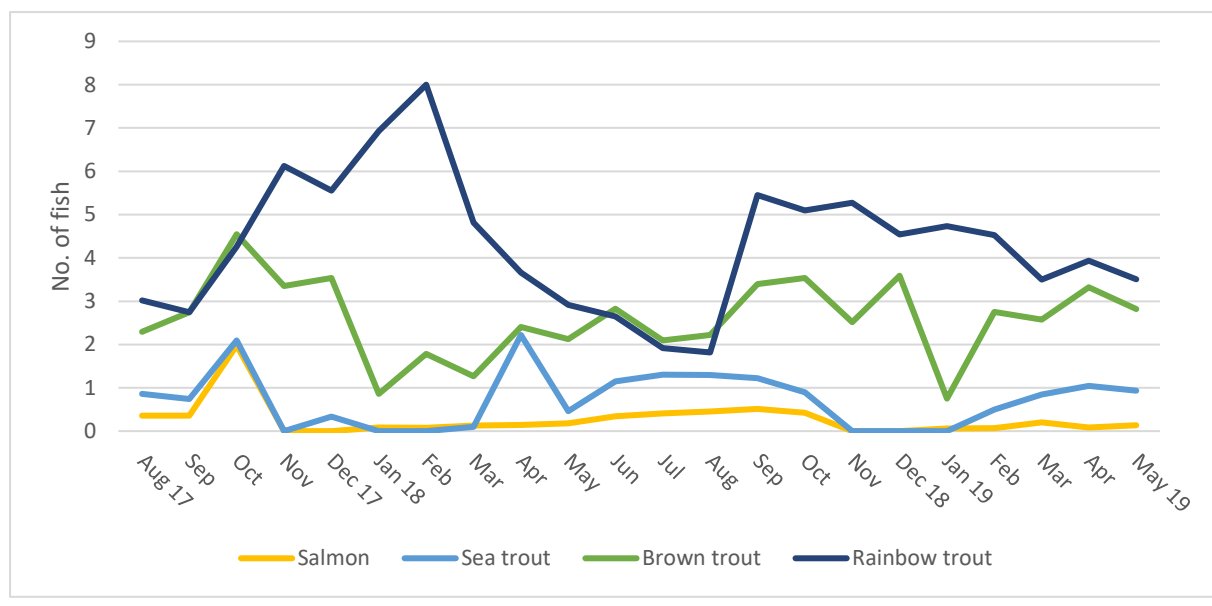


FIGURE 4.2 SEA FISH, CATCH PER SESSION



Note: This figure does not include the single angler reporting mackerel catch in November 2018.

FIGURE 4.3 SALMON AND TROUT, CATCH PER SESSION

4.4 FISHING METHODS

Tables X.9 report the percentage of respondent anglers that use the specified fishing methods for each target species. The percentages do not necessarily add up to 100 per cent, as anglers may use multiple methods. Table 18.9 shows that 57 per cent of pike anglers used lures, plugs or spinners when fishing for pike during January 2018, with 83 per cent using dead baits. While respondents did not report on the number of fish caught by each method, these data do indicate the prevalence of specific methods, as well as seasonal variations.

4.5 ANGLING LOCATIONS

In fishing, as in property, location matters. Precise geographical details crossed with catch information is closely guarded information among anglers. In the monthly survey, the only geographic information collected is the county in which anglers fished, which is less useful to anglers but gives a broad assessment of the spatial location of angling activity and how this varies through the year.

4.6 CATCH AND RELEASE

Anglers were asked to report on whether or not they kept (harvested) the fish they caught, according to four categories: no; yes – some of them; yes – most of them; and yes – all of them. Tables X.12 and X.13 report on the two extreme responses ('no' and 'yes – all of them'), while Tables X.14 show the underlying number of anglers associated with each statistic.

Several immediate trends are noticeable. Very high proportions of pike and coarse anglers release all their catch, usually well over 90 per cent. A small proportion of pike anglers, usually five per cent or less, always retain the fish they catch.

The data also facilitate checking adherence with catch and release regulations for sea bass. Only catch and release angling was permitted during 2018, during which most months saw 100 per cent compliance, but four months saw a compliance rate varying between 75 and 95 per cent. However, drawing from data in Table 18.4, the non-compliances are attributable to between one to four anglers each month. In 2019, catch and release was mandatory for January to March and Tables 19.12 and 19.13 indicate non-compliance by one angler (among five reporting for March 2019). From April to October 2019, one sea bass may be retained subject to size limits so we might expect to see lower proportions always releasing their catch.

4.7 ANGLER EXPENDITURE

Tables X.14 show that average expenditure per respondent angler in the final five months of 2017 was €322, that it averaged €303 across all of 2018, and that in the first months of 2019 it was somewhat higher, at €384 per month. The variance in expenditure across anglers is quite substantial, ranging from zero to maximum values exceeding €7,000 monthly expenditure.⁴ Over the 22 months of the angling survey reported here, the average monthly expenditure by respondent anglers was €325, which is €3,900 on an annual basis. While this is the average expenditure estimate from the survey it is not correct to say that this represents average expenditure across all anglers, as the survey is over-represented by more avid anglers, who are likely to spend more than occasional anglers. Therefore, these expenditure figures cannot be used to calculate an aggregate estimate of expenditure by recreational anglers (who make up roughly eight per cent of the adult population) within the economy.

The study by Tourism Development International (TDI) estimates the total direct expenditure by anglers to be €555 million (TDI, 2013). When indirect multiplier effects are incorporated, the value of recreational angling to the economy is valued at €755 million. While we cannot make a direct comparison with these TDI study figures, it is possible to compare average expenditure per angler from the TDI study with the estimates here, though this is subject to a few caveats. The period for which anglers had to recount their expenditure differs substantially between the two surveys; for the TDI study it was 12 months, whereas for the monthly survey it is just one month. In addition, the TDI used an intercept survey at popular fishing locations where more likely to meet avid anglers, whereas respondents to the monthly survey self-selected into the survey. In neither case are the samples likely

⁴ The maximum monthly angling related expenditure across the 22 months of the survey by a single angler is €7,550. Angling-related expenditure includes spending on travel, meals and accommodation.

to be representative of all anglers.⁵ Due to these methodological variances, average expenditure values from the two surveys are likely to differ even though the two studies nominally estimate the same expenditure metric: angling expenditure per annum. For 2012, the TDI study estimates expenditure by anglers to be €1,974 per annum for those in the Republic of Ireland and an additional €1,000 for those in Northern Ireland (see Figure 3.8 in the report of that study). The monthly survey includes anglers – north and south – and found average expenditure to be €3,900 per annum in 2018–2019.

Tables X.16 provide estimates of angler expenditure differentiated by the species targeted.⁶ The number of underlying anglers associated with these species-specific expenditure figures varies substantially. In the cases of sea trout and mackerel, the number of respondent anglers is particularly low. By contrast, anglers targeting brown trout, sea bass and salmon are among the highest spenders. Anglers solely targeting mackerel have the lowest expenditure, which reflects the normally low cost of equipment and access.

⁵ Angler intercept surveys are well recognised to be over-represented with more avid anglers. Anglers at prime angling locations may also spend more than anglers in general.

⁶ The expenditure figures in Tables X.16 relate solely to anglers targeting a single species within the surveyed month, whereas the expenditure figures in Tables X.15 also include expenditure by anglers targeting multiple species within the surveyed month.

CHAPTER 5

Monthly surveys 2017

Survey responses

Table 17.1: Monthly angler activity survey responses

Table 17.2: Number of respondents, by target species, by month

Table 17.3: Number of anglers targeting coarse species, by month

Table 17.4: Number of anglers targeting other sea fish, by month

Fishing sessions

Table 17.5: Total number of angling sessions by target species and month

Table 17.6: Average number of sessions per angler, by target species and month

Catch

Table 17.7: Total catch by target species and month

Table 17.8: Average catch per angler per month, by target species and month

Table 17.9: Average catch per session, by target species and month

Fishing methods

Table 17.10: Fishing methods used (%), by target species and month

Angling locations

Table 17.11: Angling locations, by county

Catch and release (C&R) activity

Table 17.12: Proportion of anglers that always release their catch, by species

Table 17.13: Proportion of anglers that always retain their catch, by species

Table 17.14: Associated number of anglers used to calculate C&R rates above

Angler expenditures

Table 17.15: Average expenditure by anglers and month

Table 17.16: Average expenditure by month and species

Survey responses**Table 17.1: Monthly angler activity survey responses**

	Number of respondents that:			
	fished	did not fish	Total	
Jan				A total of 584 separate anglers participated in the monthly survey on at least one occasion during the year:
Feb				
Mar				
Apr				
May				
Jun				
Jul				
Aug	310	98	408	
Sep	239	37	276	
Oct	210	187	397	
Nov	137	229	366	
Dec	125	208	333	
Average	204	152	356	

Table 17.2: Number of respondents, by target species, by month

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan									
Feb									
Mar									
Apr									
May									
Jun									
Jul									
Aug	68	67	97	63	131	34	44	75	77
Sep	69	37	70	40	84	35	26	43	52
Oct	113	44	7	10	32	33	26	19	38
Nov	87	22	0	0	4	22	13	1	26
Dec	82	16	1	2	7	18	7	0	19
Average	84	37	35	23	52	28	23	28	42

Table 17.3: Number of anglers targeting coarse species, by month

	Bream	Tench	Roach	Rudd	Hybrids	Perch	Eels	Dace	Carp
Jan									
Feb									
Mar									
Apr									
May									
Jun									
Jul									
Aug	39	38	45	30	37	33	2	6	16
Sep	21	14	25	13	20	17	1	3	11
Oct	14	1	33	9	18	35	0	10	7
Nov	7	1	17	1	8	15	0	4	2
Dec	1	0	12	2	6	10	1	4	2
Average	16	11	26	11	18	22	1	5	8

Table 17.4: Number of anglers targeting other sea fish, by month

	Cod	Coalfish	Pollack	Wrasse	Skate	Shark	Tope/ Spurdog/ Bull Huss	Flatfish (Flounder, Turbot, Place, Dab, Sole, etc.)	Ling
Jan									
Feb									
Mar									
Apr									
May									
Jun									
Jul									
Aug	24	23	56	35	2	14	17	19	19
Sep	16	16	33	17	1	7	15	13	10
Oct	12	16	21	15	2	2	9	15	7
Nov	13	9	4	3	1	0	4	14	1
Dec	11	5	7	3	0	0	1	12	0
Average	15	14	24	15	1	5	9	15	7

	Albacore Tuna	Bluefin Tuna	Ray	Mullet (all types)	Smooth- hound	Gurnard	Gilthead Bream
Jan							
Feb							
Mar							
Apr							
May							
Jun							
Jul							
Aug	0	3	15	13	14	19	2
Sep	0	4	8	7	8	10	1
Oct	0	1	11	7	4	9	0
Nov	0	0	5	0	0	3	0
Dec	0	0	3	0	0	0	0
Average	0	2	8	5	5	8	1

Fishing Sessions

(A fishing session comprises each period of time dedicated solely to fishing)

Table 17.5: Total number of angling sessions by target species and month

(by survey respondents)

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan									
Feb									
Mar									
Apr									
May									
Jun									
Jul									
Aug	272	351	604	370	758	109	159	278	293
Sep	363	167	394	158	457	119	136	143	159
Oct	518	135	46	33	97	120	99	75	115
Nov	387	62	0	0	20	56	43	2	86
Dec	318	55	4	3	28	49	22	0	63
Avg	372	154	210	113	272	91	92	100	143

Table 17.6: Average number of sessions per angler, by target species and month

(by survey respondents)

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan									
Feb									
Mar									
Apr									
May									
Jun									
Jul									
Aug	4.0	5.2	6.2	5.9	5.8	3.2	3.6	3.7	3.8
Sep	5.3	4.5	5.6	4.0	5.4	3.4	5.2	3.3	3.1
Oct	4.6	3.1	6.6	3.3	3.0	3.6	3.8	3.9	3.0
Nov	4.4	2.8	-	-	5.0	2.5	3.3	2.0	3.3
Dec	3.9	3.4	4.0	1.5	4.0	2.7	3.1	-	3.3
Avg	4.4	3.8	5.6	3.7	4.7	3.1	3.8	3.2	3.3

Catch**Table 17.7: Total catch by target species and month**

	Pike	Coarse fish >1kg/2lbs	All coarse fish - kgs	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan										
Feb										
Mar										
Apr										
May										
Jun										
Jul										
Aug	667	799	3258	215	319	1740	329	211	2291	1395
Sep	666	427	1752	142	117	1255	327	128	1168	946
Oct	1002	168	1059	91	69	441	511	197	431	756
Nov	747	160	325	0	0	67	343	23	8	343
Dec	623	19	177	0	1	99	272	6	0	271
Avg	741	315	1314	90	101	720	356	113	780	742

Table 17.8: Average catch per angler per month, by target species and month

	Pike	Coarse fish >1kg/2lbs	All coarse fish - kgs	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan										
Feb										
Mar										
Apr										
May										
Jun										
Jul										
Aug	9.8	11.9	48.6	2.2	5.1	13.3	9.7	4.8	30.5	18.1
Sep	9.7	11.5	47.4	2.0	2.9	14.9	9.3	4.9	27.2	18.2
Oct	8.9	3.8	24.1	13.0	6.9	13.8	15.5	7.6	22.7	19.9
Nov	8.6	7.3	14.8	-	-	16.8	15.6	1.8	8.0	13.2
Dec	7.6	1.2	11.1	0.0	0.5	14.1	15.1	0.9	-	14.3
Avg	8.9	7.1	29.2	4.3	3.8	14.6	13.0	4.0	22.1	16.7

Table 17.9: Average catch per session, by target species and month

	Pike	Coarse fish >1kg/2lbs	All coarse fish - kgs	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan										
Feb										
Mar										
Apr										
May										
Jun										
Jul										
Aug	2.5	2.3	9.3	0.4	0.9	2.3	3.0	1.3	8.2	4.8
Sep	1.8	2.6	10.5	0.4	0.7	2.7	2.7	0.9	8.2	5.9
Oct	1.9	1.2	7.8	2.0	2.1	4.5	4.3	2.0	5.7	6.6
Nov	1.9	2.6	5.2	-	-	3.4	6.1	0.5	4.0	4.0
Dec	2.0	0.3	3.2	0.0	0.3	3.5	5.6	0.3	-	4.3
Avg	2.0	1.8	7.2	0.7	1.0	3.3	4.3	1.0	6.5	5.1

Fishing Methods

Table 17.10: Fishing methods used (%), by target species and month

(by survey respondents)

Pike	Lures, Dead baits plugs or spinners	Fly fishing	Coarse fish	Float	Ledgering/ Swimfeeder	Pole	Other
Jan							
Feb							
Mar							
Apr							
May							
Jun							
Jul							
Aug	76	31	19	75	73	24	15
Sep	80	42	26	65	57	14	27
Oct	78	65	19	45	43	27	34
Nov	71	72	15	41	55	36	18
Dec	54	76	10	63	44	25	13

Salmon	Fly fishing	Worms/ Maggots	Prawn/ Shrimp	Spinner/ Spoon	Trolling	Sea trout	Fly fishing	Worms/ Maggots	Spinner/ Spoon	Trolling
Jan										
Feb										
Mar										
Apr										
May										
Jun										
Jul										
Aug	82	9	9	25	9	87	10	19	3	3
Sep	76	16	7	39	3	73	23	23	3	3
Oct	86	14	14	43	0	70	10	50	0	0
Nov	0	0	0	0	0	0	0	0	0	0
Dec	100	0	0	100	0	0	50	50	0	0

Brown Trout	Fly fishing	Worms/ Maggots	Spinner/ Spoon	Plugs/ Plastic lures	Deadbaits (incl. minnows)	Rainbow Trout	Fly fishing	Worms/ Maggots	Spinner/ Spoon	Plugs/ Plastic lures	Deadbaits (incl. minnows)
Jan											
Feb											
Mar											
Apr											
May											
Jun											
Jul											
Aug	92	8	16	7	2	100	3	9	0	0	0
Sep	89	11	13	10	0	89	6	9	3	0	0
Oct	91	6	13	6	0	97	0	6	0	0	0
Nov	100	0	0	0	0	100	0	0	0	0	0
Dec	100	0	14	0	0	100	6	0	0	0	0

Sea Bass	Fly fishing	Plugs / Hard Lures / Spinners	Natural Bait	Soft lures	Mackerel	Feathers	Spinners	Natural Bait
Jan								
Feb								
Mar								
Apr								
May								
Jun								
Jul								
Aug	14	52	45	52	92	24	9	
Sep	12	58	54	50	86	21	21	
Oct	8	38	58	38	79	37	26	
Nov	15	31	62	23	0	0	100	
Dec	0	14	71	29	0	0	0	

Table 17.10 (continued): Fishing methods used (%), by target species and month
(by survey respondents)

Other Sea fish	Feathers	Spinners	Natural Baits	Perks / jigs	Other
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug	45	17	73	38	21
Sep	50	23	71	31	19
Oct	29	16	82	26	16
Nov	0	0	92	4	8
Dec	0	5	95	11	5

Angling locations**Table 17.11: Angling locations, by county**

(Number of anglers fishing in each county, at least once in the month)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sum
Antrim								4	5	2	2	1	14
Armagh								5	7	4	3	3	22
Carlow								12	9	10	5	6	42
Cavan								31	20	30	17	19	117
Clare								22	19	14	11	7	73
Cork								43	28	14	10	12	107
Derry								1	0	5	4	0	10
Donegal								24	18	9	3	3	57
Down								7	8	3	4	2	24
Dublin								29	19	15	13	6	82
Fermanagh								3	5	12	8	5	33
Galway								65	33	27	16	13	154
Kerry								24	15	14	2	3	58
Kildare								21	11	14	8	6	60
Kilkenny								14	12	8	6	9	49
Laois								5	4	3	2	1	15
Leitrim								20	28	23	16	15	102
Limerick								5	4	7	1	2	19
Longford								10	12	15	9	6	52
Louth								22	8	4	1	1	36
Mayo								53	39	13	14	6	125
Meath								20	11	8	3	5	47
Monaghan								18	12	17	19	17	83
Offaly								7	8	9	6	1	31
Roscommon								27	21	25	15	9	97
Sligo								9	12	5	3	3	32
Tipperary								16	7	10	6	4	43
Tyrone								4	2	4	1	1	12
Waterford								26	13	10	12	8	69
Westmeath								37	23	27	10	8	105
Wexford								27	27	12	4	4	74
Wicklow								24	19	14	10	3	70

Catch & Release (C&R) activity**Table 17.12: Proportion of anglers that always release their catch, by species**

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan									
Feb									
Mar									
Apr									
May									
Jun									
Jul									
Aug	0.97	0.90	0.76	0.69	0.74	0.56	0.91	0.16	0.53
Sep	0.97	0.86	0.82	0.89	0.71	0.70	0.88	0.19	0.54
Oct	0.95	0.91	1.00	0.90	0.88	0.67	0.85	0.05	0.59
Nov	0.98	0.95	-	-	1.00	0.86	0.77	1.00	0.76
Dec	0.96	0.81	1.00	1.00	1.00	0.89	0.83	-	0.72

Table 17.13: Proportion of anglers that always retain their catch, by species

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan									
Feb									
Mar									
Apr									
May									
Jun									
Jul									
Aug	0.00	0.00	0.11	0.08	0.01	0.06	0.02	0.26	0.05
Sep	0.01	0.03	0.05	0.00	0.00	0.00	0.00	0.21	0.06
Oct	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.42	0.03
Nov	0.01	0.00	-	-	0.00	0.05	0.00	0.00	0.04
Dec	0.02	0.06	0.00	0.00	0.00	0.00	0.00	-	0.06

Table 17.14: Associated number of anglers used to calculate C&R rates above

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan									
Feb									
Mar									
Apr									
May									
Jun									
Jul									
Aug	68	67	93	61	128	34	43	70	76
Sep	69	36	66	38	83	33	25	42	52
Oct	112	44	7	10	32	33	26	19	37
Nov	87	22	0	0	4	22	13	1	25
Dec	80	16	1	2	6	18	6	0	18

Angler Expenditures**Table 17.15: Average Expenditure by anglers and month**

(Across all target species & at least one expenditure per angler)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Average expenditure, €								478	365	280	267	218	322
No. of anglers								313	241	302	249	245	270

Table 17.16: Average Expenditure by month and species

(based on data from anglers targeting only the indicated species)

Average expenditure, €	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Pike								265	265	278	342	261	282
Coarse fish								365	276	262	277	227	281
Salmon								418	338	232	-	-	329
Sea trout								699	267	291	-	-	419
Brown trout								396	335	192	969	921	563
Rainbow trout								216	48	169	155	177	153
Sea bass								385	667	165	224	283	345
Mackerel								62	95	87	-	-	81
Other sea fish								345	148	185	240	189	221

Table 17.17: Associated number of anglers used to calculate statistics in table above

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sum
Pike								20	25	77	65	64	251
Coarse fish								26	14	12	7	5	64
Salmon								22	19	1	-	-	42
Sea trout								3	5	1	-	-	9
Brown trout								31	24	10	1	1	67
Rainbow trout								2	1	10	12	10	35
Sea bass								4	3	6	4	3	20
Mackerel								4	2	2	-	-	8
Other sea fish								5	9	11	14	12	51

CHAPTER 6

Monthly surveys 2018

Survey responses

Table 18.1: Monthly angler activity survey responses

Table 18.2: Number of respondents, by target species, by month

Table 18.3: Number of anglers targeting coarse species, by month

Table 18.4: Number of anglers targeting other sea fish, by month

Fishing sessions

Table 18.5: Total number of angling sessions by target species and month

Table 18.6: Average number of sessions per angler, by target species and month

Catch

Table 18.7: Total catch by target species and month

Table 18.8: Average catch per angler per month, by target species and month

Table 18.9: Average catch per session, by target species and month

Fishing methods

Table 18.10: Fishing methods used (%), by target species and month

Angling locations

Table 18.11: Angling locations, by county

Catch and release (C&R) activity

Table 18.12: Proportion of anglers that always release their catch, by species

Table 18.13: Proportion of anglers that always retain their catch, by species

Table 18.14: Associated number of anglers used to calculate C&R rates above

Angler expenditures

Table 18.15: Average expenditure by anglers and month

Table 18.16: Average expenditure by month and species

Survey responses**Table 18.1: Monthly angler activity survey responses**

Number of respondents that:				
	fished	did not fish	Total	
Jan	92	235	327	A total of 640 separate anglers participated in the monthly survey on at least one occasion during the year:
Feb	104	223	327	
Mar	169	159	328	
Apr	174	100	274	
May	270	27	297	
Jun	227	114	341	
Jul	190	126	316	
Aug	227	110	337	
Sep	206	117	323	
Oct	135	172	307	
Nov	99	209	308	
Dec	90	150	240	
Average	165	145	310	

Table 18.2: Number of respondents, by target species, by month

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	60	9	6	0	2	11	4	0	18
Feb	58	11	21	1	15	5	2	0	11
Mar	64	26	33	9	70	20	5	0	16
Apr	55	34	41	9	71	19	7	3	19
May	63	45	101	30	134	32	19	9	32
Jun	35	45	79	33	88	21	21	32	40
Jul	21	47	70	34	64	15	21	41	43
Aug	33	51	81	49	74	20	24	60	46
Sep	56	32	77	29	81	29	20	29	26
Oct	72	26	6	8	21	24	18	8	21
Nov	63	14	0	0	6	14	10	1	16
Dec	57	10	0	0	3	13	4	2	17
Average	53	29	43	17	52	19	13	15	25

Table 18.3: Number of anglers targeting coarse species, by month

	Bream	Tench	Roach	Rudd	Hybrids	Perch	Eels	Dace	Carp
Jan	1	0	7	0	4	5	0	2	2
Feb	3	0	8	0	5	7	0	3	2
Mar	7	6	19	7	10	11	1	0	7
Apr	23	15	21	9	20	14	0	0	10
May	24	21	24	17	16	13	2	1	11
Jun	26	28	24	20	25	16	0	1	9
Jul	20	22	29	22	20	22	1	0	9
Aug	31	25	35	22	25	26	1	2	8
Sep	14	10	15	8	13	17	0	0	6
Oct	10	4	18	12	10	20	0	2	4
Nov	5	0	12	2	5	9	0	0	2
Dec	2	0	8	2	2	6	0	0	2
Average	14	11	18	10	13	14	0	1	6

Table 18.4: Number of anglers targeting other sea fish, by month

	Cod	Coalfish	Pollack	Wrasse	Skate	Shark	Tope/ Spurdog/ Bull Huss	Flatfish (Flounder, Turbot, Place, Dab, Sole, etc.)	Ling
Jan	11	7	6	3	0	0	0	9	1
Feb	8	8	3	1	0	0	0	8	0
Mar	7	7	7	1	0	0	2	9	0
Apr	7	10	13	7	0	1	6	7	1
May	10	12	21	12	2	0	3	11	4
Jun	13	19	27	13	4	2	14	10	10
Jul	14	16	32	18	1	5	14	14	8
Aug	19	14	29	22	3	5	10	19	16
Sep	12	11	20	12	0	4	5	11	4
Oct	7	8	8	3	0	0	3	8	0
Nov	8	3	3	2	0	0	1	8	1
Dec	8	3	2	1	0	0	4	8	2
Average	10	10	14	8	1	1	5	10	4

	Albacore Tuna	Bluefin Tuna	Ray	Mullet (all types)	Smooth- hound	Gurnard	Gilthead Bream
Jan	0	0	3	0	0	0	0
Feb	0	0	1	0	0	0	0
Mar	0	0	2	1	0	2	0
Apr	0	0	6	2	1	4	1
May	0	0	9	5	2	5	1
Jun	0	0	8	8	15	12	4
Jul	0	0	12	3	11	10	3
Aug	0	3	12	5	7	18	2
Sep	1	4	5	5	2	6	3
Oct	0	2	3	2	0	1	1
Nov	0	0	1	0	1	0	0
Dec	0	0	2	1	0	0	0
Average	0	1	5	3	3	5	1

Fishing Sessions

(A fishing session comprises each period of time dedicated solely to fishing)

Table 18.5: Total number of angling sessions by target species and month

(by survey respondents)

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	197	42	35	0	7	28	13	0	39
Feb	186	21	68	2	32	13	4	0	31
Mar	220	64	154	41	179	49	18	0	30
Apr	194	115	220	41	236	65	30	6	51
May	272	160	522	70	849	107	76	16	100
Jun	141	183	464	109	437	51	101	87	143
Jul	68	177	327	138	249	37	92	146	200
Aug	143	190	462	208	341	60	112	232	216
Sep	275	117	443	98	350	66	115	87	103
Oct	352	97	26	19	65	61	89	28	71
Nov	223	46	0	0	33	48	31	1	48
Dec	209	15	0	0	17	39	16	2	33
Avg	207	102	227	61	233	52	58	50	89

Table 18.6: Average number of sessions per angler, by target species and month

(by survey respondents)

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	3.3	4.7	5.8	-	3.5	2.5	3.3	-	2.2
Feb	3.2	1.9	3.2	2.0	2.1	2.6	2.0	-	2.8
Mar	3.4	2.5	4.7	4.6	2.6	2.5	3.6	-	1.9
Apr	3.5	3.4	5.4	4.6	3.3	3.4	4.3	2.0	2.7
May	4.3	3.6	5.2	2.3	6.3	3.3	4.0	1.8	3.1
Jun	4.0	4.1	5.9	3.4	5.0	2.4	4.8	2.7	3.6
Jul	3.2	3.8	4.7	4.1	3.9	2.5	4.4	3.6	4.7
Aug	4.3	3.7	5.7	4.2	4.6	3.0	4.7	3.9	4.7
Sep	4.9	3.7	5.8	3.4	4.4	2.3	5.8	3.0	4.0
Oct	4.9	3.7	4.3	2.4	3.1	2.5	4.9	3.5	3.4
Nov	3.5	3.3	-	-	5.5	3.4	3.1	1.0	3.0
Dec	3.7	1.5	-	-	5.7	3.0	4.0	1.0	1.9
Avg	3.9	3.3	5.1	3.4	4.2	2.8	4.1	2.5	3.2

Catch**Table 18.7: Total catch by target species and month**

	Pike	Coarse fish >1kg/2lbs	All coarse fish - kgs	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	401	15	239	3	0	6	194	0	0	111
Feb	274	12	172	5	0	57	104	0	0	162
Mar	412	51	358	20	4	227	236	1	0	102
Apr	467	234	792	32	91	568	238	34	2	250
May	681	218	1179	94	32	1802	312	86	94	566
Jun	340	469	1039	159	125	1234	135	78	711	685
Jul	197	433	1771	133	180	521	71	205	1090	829
Aug	395	346	1819	210	270	756	109	185	1809	1056
Sep	792	259	869	226	120	1189	360	200	893	578
Oct	819	186	527	11	17	230	311	63	167	252
Nov	604	106	198	0	0	83	253	13	60	93
Dec	489	3	34	0	0	61	177	3	3	376
Avg	489	194	750	74	70	561	208	72	402	422

Table 18.8: Average catch per angler per month, by target species and month

	Pike	Coarse fish >1kg/2lbs	All coarse fish - kgs	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	6.7	1.7	26.6	0.5	-	3.0	17.6	0.0	-	6.2
Feb	4.7	1.1	15.6	0.2	0.0	3.8	20.8	0.0	-	14.7
Mar	6.4	2.0	13.8	0.6	0.4	3.2	11.8	0.2	-	6.4
Apr	8.5	6.9	23.3	0.8	10.1	8.0	12.5	4.9	0.7	13.2
May	10.8	4.8	26.2	0.9	1.1	13.4	9.8	4.5	10.4	17.7
Jun	9.7	10.4	23.1	2.0	3.8	14.0	6.4	3.7	22.2	17.1
Jul	9.4	9.2	37.7	1.9	5.3	8.1	4.7	9.8	26.6	19.3
Aug	12.0	6.8	35.7	2.6	5.5	10.2	5.5	7.7	30.2	23.0
Sep	14.1	8.1	27.2	2.9	4.1	14.7	12.4	10.0	30.8	22.2
Oct	11.4	7.2	20.3	1.8	2.1	11.0	13.0	3.5	20.9	12.0
Nov	9.6	7.6	14.1	-	-	13.8	18.1	1.3	60.0	5.8
Dec	8.6	0.3	3.4	-	-	20.3	13.6	0.8	1.5	22.1
Avg	9.3	5.5	22.2	1.4	3.6	10.3	12.2	3.9	22.6	15.0

Table 18.9: Average catch per session, by target species and month

	Pike	Coarse fish >1kg/2lbs	All coarse fish - kgs	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	2.0	0.4	5.7	0.1	-	0.9	6.9	0.0	-	2.8
Feb	1.5	0.6	8.2	0.1	0.0	1.8	8.0	0.0	-	5.2
Mar	1.9	0.8	5.6	0.1	0.1	1.3	4.8	0.1	-	3.4
Apr	2.4	2.0	6.9	0.1	2.2	2.4	3.7	1.1	0.3	4.9
May	2.5	1.4	7.4	0.2	0.5	2.1	2.9	1.1	5.9	5.7
Jun	2.4	2.6	5.7	0.3	1.1	2.8	2.6	0.8	8.2	4.8
Jul	2.9	2.4	10.0	0.4	1.3	2.1	1.9	2.2	7.5	4.1
Aug	2.8	1.8	9.6	0.5	1.3	2.2	1.8	1.7	7.8	4.9
Sep	2.9	2.2	7.4	0.5	1.2	3.4	5.5	1.7	10.3	5.6
Oct	2.3	1.9	5.4	0.4	0.9	3.5	5.1	0.7	6.0	3.5
Nov	2.7	2.3	4.3	-	-	2.5	5.3	0.4	60.0	1.9
Dec	2.3	0.2	2.2	-	-	3.6	4.5	0.2	1.5	11.4
Avg	2.4	1.5	6.5	0.3	1.0	2.4	4.4	0.8	11.9	4.9

Fishing Methods

Table 18.10: Fishing methods used (%), by target species and month

(by survey respondents)

Pike	Lures, Dead baits plugs or spinners	Fly fishing	Coarse fish	Float	Ledgering/ Swimfeeder	Pole	Other
Jan	57	83		67	22	44	22
Feb	57	79		55	55	45	27
Mar	70	64		58	58	23	15
Apr	82	49		50	76	26	6
May	81	35		64	60	9	9
Jun	80	40		60	71	13	11
Jul	71	33		66	55	15	17
Aug	85	30		59	67	16	16
Sep	75	38		44	53	16	22
Oct	75	63		77	46	35	15
Nov	65	76		57	36	43	21
Dec	60	82		60	30	30	10

Salmon	Fly fishing	Worms/ Maggots	Prawn/ Shrimp	Spinner/ Spoon	Trolling
Jan	50	33	33	67	0
Feb	86	0	0	29	5
Mar	76	12	6	48	0
Apr	88	5	0	20	5
May	87	13	8	23	4
Jun	85	16	16	28	3
Jul	83	13	6	21	3
Aug	84	15	11	26	0
Sep	87	16	12	27	1
Oct	100	0	0	50	0
Nov	0	0	0	0	0
Dec	0	0	0	0	0

Sea trout	Fly fishing	Worms/ Maggots	Spinner/ Spoon	Trolling
Jan	0	0	0	0
Feb	100	0	0	0
Mar	44	0	78	0
Apr	44	11	56	0
May	70	13	37	7
Jun	82	12	24	6
Jul	82	9	26	3
Aug	78	14	22	0
Sep	86	21	14	0
Oct	63	0	25	0
Nov	0	0	0	0
Dec	0	0	0	0

Brown Trout	Fly fishing	Worms/ Maggots	Spinner/ Spoon	Plugs/ Plastic lures	Deadbaits (incl. minnows)
Jan	100	0	0	0	0
Feb	80	0	13	27	27
Mar	79	4	19	16	1
Apr	82	11	15	7	1
May	90	7	10	5	0
Jun	94	6	7	2	0
Jul	92	8	9	5	3
Aug	86	9	14	7	0
Sep	89	6	11	14	0
Oct	95	5	10	5	0
Nov	100	0	0	0	0
Dec	100	0	0	0	0

Rainbow Trout	Fly fishing	Worms/ Maggots	Spinner/ Spoon	Plugs/ Plastic lures	Deadbaits (incl. minnows)
Jan	100	0	0	0	0
Feb	100	0	0	0	0
Mar	95	0	10	5	0
Apr	95	5	5	11	0
May	84	9	19	9	0
Jun	86	5	10	10	0
Jul	93	7	7	7	0
Aug	100	0	0	0	0
Sep	97	0	0	3	0
Oct	100	0	0	0	0
Nov	93	7	0	0	0
Dec	100	0	0	0	0

Sea Bass	Fly fishing	Plugs / Hard Lures / Spinners	Natural Bait	Soft lures
Jan	0	0	75	25
Feb	0	0	100	0
Mar	20	80	20	60
Apr	0	29	57	57
May	5	53	42	47
Jun	14	57	48	57
Jul	10	43	48	62
Aug	0	54	42	54
Sep	5	55	35	70
Oct	0	44	56	44
Nov	0	30	70	20
Dec	0	50	75	50

Mackerel	Feathers	Spinners	Natural Bait
Jan	0	0	0
Feb	0	0	0
Mar	0	0	0
Apr	67	33	33
May	100	11	33
Jun	91	22	9
Jul	85	34	12
Aug	92	27	18
Sep	97	21	21
Oct	88	25	38
Nov	100	0	0
Dec	100	0	0

Table 18.10 (continued): Fishing methods used (%), by target species and month
(by survey respondents)

Other Sea fish	Feathers	Spinners	Natural Baits	Perks / jigs	Other
Jan	0	6	78	6	6
Feb	9	9	91	0	0
Mar	38	13	75	19	13
Apr	21	21	79	21	5
May	47	38	72	22	16
Jun	40	33	65	33	20
Jul	56	23	77	35	14
Aug	48	22	76	33	17
Sep	38	19	92	38	12
Oct	19	24	76	19	10
Nov	6	13	69	6	19
Dec	18	12	94	6	0

Angling locations**Table 18.11: Angling locations, by county**

(Number of anglers fishing in each county, at least once in the month)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sum
Antrim	2	6	2	3	3	3	6	3	2	4	1	1	36
Armagh	1	1	1	3	2	3	1	3	2	3	4	1	25
Carlow	8	4	5	4	9	6	3	4	3	1	2	1	50
Cavan	17	14	14	20	28	16	12	22	19	19	17	10	208
Clare	7	5	11	11	20	5	7	15	15	9	6	7	118
Cork	7	15	13	17	36	27	20	21	31	13	7	5	212
Derry	0	1	1	2	3	3	4	6	3	0	1	1	25
Donegal	1	4	9	7	19	15	19	22	17	9	2	1	125
Down	2	2	4	2	5	4	7	9	7	3	4	3	52
Dublin	6	4	7	7	14	14	11	13	11	5	4	3	99
Fermanagh	4	4	5	7	9	3	5	3	11	6	6	3	66
Galway	7	19	27	23	49	38	27	40	28	18	10	10	296
Kerry	2	2	9	6	16	12	11	13	11	5	3	1	91
Kildare	11	4	7	7	5	10	8	16	9	7	4	4	92
Kilkenny	7	2	6	3	12	7	3	3	8	5	3	5	64
Laois	1	0	0	2	3	2	1	1	2	2	0	1	15
Leitrim	12	9	18	24	24	19	16	15	16	18	12	8	191
Limerick	0	1	6	3	7	5	4	3	4	2	1	0	36
Longford	0	2	7	11	6	4	1	2	4	5	7	5	54
Louth	0	1	5	6	7	5	6	8	7	1	2	2	50
Mayo	4	15	18	27	67	48	34	48	38	5	4	4	312
Meath	2	0	6	9	15	15	16	9	16	8	2	2	100
Monaghan	14	14	13	14	17	15	11	14	16	12	16	15	171
Offaly	1	1	6	5	10	6	7	6	3	4	5	1	55
Roscommon	4	9	14	11	20	15	5	5	8	11	11	8	121
Sligo	2	0	4	6	9	11	10	9	2	3	1	1	58
Tipperary	1	1	6	7	15	12	7	5	9	3	2	4	72
Tyrone	2	0	0	0	2	4	0	4	9	8	1	3	33
Waterford	8	3	7	3	12	13	12	13	14	7	5	5	102
Westmeath	4	8	15	20	27	17	16	18	26	12	9	9	181
Wexford	1	3	5	4	14	23	15	20	14	8	4	3	114
Wicklow	4	8	9	15	18	17	14	18	12	7	5	6	133

Catch & Release (C&R) activity**Table 18.12: Proportion of anglers that always release their catch, by species**

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	0.95	0.89	1.00	-	1.00	1.00	1.00	-	0.82
Feb	0.98	0.91	0.90	1.00	0.73	1.00	1.00	-	0.45
Mar	0.98	0.96	0.90	0.88	0.83	0.75	1.00	-	0.88
Apr	0.93	1.00	0.74	0.67	0.76	0.79	1.00	0.67	0.63
May	0.98	0.98	0.77	0.90	0.70	0.75	1.00	0.25	0.53
Jun	0.97	1.00	0.69	0.84	0.73	0.81	0.95	0.35	0.59
Jul	0.95	0.91	0.73	0.74	0.80	0.87	1.00	0.20	0.48
Aug	0.97	0.88	0.65	0.79	0.73	0.85	1.00	0.19	0.67
Sep	0.96	0.97	0.73	0.86	0.70	0.68	1.00	0.14	0.65
Oct	0.96	0.85	1.00	1.00	0.75	0.78	0.76	0.12	0.67
Nov	0.97	0.86	-	-	1.00	0.85	0.90	0.00	0.73
Dec	0.93	0.90	-	-	1.00	1.00	0.75	0.50	0.65

Table 18.13: Proportion of anglers that always retain their catch, by species

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	0.02	0.00	0.00	-	0.00	0.00	0.00	-	0.00
Feb	0.00	0.00	0.10	0.00	0.07	0.00	0.00	-	0.00
Mar	0.00	0.00	0.06	0.00	0.00	0.00	0.00	-	0.00
Apr	0.02	0.00	0.13	0.00	0.07	0.00	0.00	0.33	0.00
May	0.00	0.00	0.10	0.00	0.03	0.00	0.00	0.38	0.03
Jun	0.00	0.00	0.15	0.03	0.02	0.05	0.05	0.23	0.00
Jul	0.05	0.00	0.10	0.03	0.00	0.00	0.00	0.28	0.05
Aug	0.03	0.00	0.08	0.06	0.03	0.00	0.00	0.22	0.02
Sep	0.02	0.00	0.05	0.11	0.06	0.11	0.00	0.43	0.04
Oct	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
Nov	0.02	0.00	-	-	0.00	0.00	0.10	0.00	0.00
Dec	0.05	0.00	-	-	0.00	0.00	0.25	0.50	0.06

Table 18.14: Associated number of anglers used to calculate C&R rates above

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	60	9	6	0	2	11	2	0	17
Feb	55	11	20	1	15	5	2	0	11
Mar	64	26	31	8	69	20	5	0	16
Apr	55	34	39	9	71	19	7	3	19
May	62	43	93	30	130	32	18	8	32
Jun	35	44	72	31	86	21	21	31	37
Jul	20	46	62	31	61	15	20	40	42
Aug	33	51	75	47	73	20	24	59	46
Sep	53	32	73	28	79	28	20	28	26
Oct	71	26	6	6	20	23	17	8	21
Nov	63	14	0	0	6	13	10	1	15
Dec	57	10	0	0	3	13	4	2	17

Angler Expenditures**Table 18.15: Average Expenditure by anglers and month**

(Across all target species & at least one expenditure per angler)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Average expenditure, €	239	264	316	298	433	310	272	346	363	245	289	263	303
No. of anglers	217	229	248	222	271	277	251	272	247	229	127	118	226

Table 18.16: Average Expenditure by month and species

(based on data from anglers targeting only the indicated species)

Average expenditure, €	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Pike	310	325	383	177	221	152	273	261	231	321	343	225	269
Coarse fish	319	188	212	222	271	247	166	248	213	235	437	97	238
Salmon	555	381	597	380	398	365	221	290	291	127	-	-	361
Sea trout	-	-	-	526	-	-	280	296	53	-	-	-	289
Brown trout	-	244	328	206	540	313	183	329	270	148	608	837	364
Rainbow trout	239	314	445	117	194	129	73	84	89	145	322	258	201
Sea bass	96	105	460	370	539	418	315	436	560	401	406	225	361
Mackerel	-	-	-	-	-	214	126	157	107	-	-	-	151
Other sea fish	165	288	225	111	216	241	377	183	160	137	175	129	201

Table 18.17: Associated number of anglers used to calculate statistics in table above

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sum
Pike	47	47	39	31	24	13	4	5	24	46	51	48	379
Coarse fish	3	5	11	20	16	21	22	19	10	7	3	4	141
Salmon	5	14	16	18	39	33	26	29	28	1	-	-	209
Sea trout	-	-	-	1	-	-	3	3	1	-	-	-	8
Brown trout	-	9	32	27	48	31	17	21	16	6	2	1	210
Rainbow trout	8	2	5	3	2	5	4	5	3	7	9	8	61
Sea bass	1	1	3	3	6	5	4	3	6	6	3	2	43
Mackerel	-	-	-	-	-	2	4	3	1	-	-	-	10
Other sea fish	11	8	8	10	9	6	7	2	7	6	8	11	93

CHAPTER 7

Monthly surveys 2019

Survey responses

Table 19.1: Monthly angler activity survey responses

Table 19.2: Number of respondents, by target species, by month

Table 19.3: Number of anglers targeting coarse species, by month

Table 19.4: Number of anglers targeting other sea fish, by month

Fishing sessions

Table 19.5: Total number of angling sessions by target species and month

Table 19.6: Average number of sessions per angler, by target species and month

Catch

Table 19.7: Total catch by target species and month

Table 19.8: Average catch per angler per month, by target species and month

Table 19.9: Average catch per session, by target species and month

Fishing methods

Table 19.10: Fishing methods used (%), by target species and month

Angling locations

Table 19.11: Angling locations, by county

Catch and release (C&R) activity

Table 19.12: Proportion of anglers that always release their catch, by species

Table 19.13: Proportion of anglers that always retain their catch, by species

Table 19.14: Associated number of anglers used to calculate C&R rates above

Angler expenditures

Table 19.15: Average expenditure by anglers and month

Table 19.16: Average expenditure by month and species

Survey responses**Table 19.1: Monthly angler activity survey responses**

	Number of respondents that:			
	fished	did not fish	Total	
Jan	92	207	299	A total of 430 separate anglers participated in the monthly survey on at least one occasion during the year:
Feb	105	193	298	
Mar	156	147	303	
Apr	190	80	270	
May	200	82	282	
Jun				
Jul				
Aug				
Sep				
Oct				
Nov				
Dec				
Average	149	142	290	

Table 19.2: Number of respondents, by target species, by month

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	53	13	10	0	2	12	7	1	13
Feb	53	16	23	1	18	14	2	1	16
Mar	43	23	34	9	71	30	6	0	14
Apr	41	33	60	8	83	25	12	5	21
May	33	32	65	19	115	28	16	11	26
Jun									
Jul									
Aug									
Sep									
Oct									
Nov									
Dec									
Average	45	23	38	7	58	22	9	4	18

Table 19.3: Number of anglers targeting coarse species, by month

	Bream	Tench	Roach	Rudd	Hybrids	Perch	Eels	Dace	Carp
Jan	1	0	9	2	6	9	0	1	0
Feb	3	0	8	2	7	10	0	1	3
Mar	4	5	10	5	9	9	0	0	6
Apr	10	10	19	8	11	15	1	0	7
May	14	13	18	12	16	14	1	0	2
Jun									
Jul									
Aug									
Sep									
Oct									
Nov									
Dec									
Average	6	6	13	6	10	11	0	0	4

Table 19.4: Number of anglers targeting other sea fish, by month

	Cod	Coalfish	Pollack	Wrasse	Skate	Shark	Tope/ Spurdog/ Bull Huss	Flatfish (Flounder, Turbot, Place, Dab, Sole, etc.)	Ling
Jan	9	6	3	2	1	0	1	6	1
Feb	8	9	7	2	0	1	6	10	1
Mar	8	5	6	4	0	1	6	5	4
Apr	6	7	8	6	1	2	8	10	4
May	11	11	19	12	3	1	5	8	9
Jun									
Jul									
Aug									
Sep									
Oct									
Nov									
Dec									
Average	8	8	9	5	1	1	5	8	4

	Albacore Tuna	Bluefin Tuna	Ray	Mullet (all types)	Smooth- hound	Gurnard	Gilthead Bream
Jan	0	0	2	0	0	1	0
Feb	0	0	2	0	0	2	0
Mar	0	0	2	0	0	0	0
Apr	1	0	5	2	2	6	3
May	0	0	5	2	4	7	1
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Average	0	0	3	1	1	3	1

Fishing Sessions

(A fishing session comprises each period of time dedicated solely to fishing)

Table 19.5: Total number of angling sessions by target species and month

(by survey respondents)

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	154	32	17	0	4	26	18	3	24
Feb	196	33	88	2	65	42	4	1	23
Mar	152	101	163	33	239	96	23	0	36
Apr	114	127	348	24	376	65	43	8	61
May	128	99	392	60	732	71	45	23	64
Jun									
Jul									
Aug									
Sep									
Oct									
Nov									
Dec									
Avg	149	78	202	24	283	60	27	7	42

Table 19.6: Average number of sessions per angler, by target species and month

(by survey respondents)

	Pike	Coarse fish	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	2.9	2.5	1.7	-	2.0	2.2	2.6	3.0	1.8
Feb	3.7	2.1	3.8	2.0	3.6	3.0	2.0	1.0	1.4
Mar	3.5	4.4	4.8	3.7	3.4	3.2	3.8	-	2.6
Apr	2.8	3.8	5.8	3.0	4.5	2.6	3.6	1.6	2.9
May	3.9	3.1	6.0	3.2	6.4	2.5	2.8	2.1	2.5
Jun									
Jul									
Aug									
Sep									
Oct									
Nov									
Dec									
Avg	3.4	3.2	4.4	3.0	4.0	2.7	3.0	1.9	2.2

Catch

Table 19.7: Total catch by target species and month

	Pike	Coarse fish >1kg/2lbs	All coarse fish - kgs	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	505	13	158	1	0	3	123	66	2	326
Feb	466	12	105	6	1	179	190	0	0	264
Mar	492	108	260	33	28	616	336	8	0	180
Apr	354	141	635	29	25	1250	256	26	127	362
May	481	259	1014	52	56	2061	249	25	247	489
Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										
Avg	460	107	434	24	22	822	231	25	75	324

Table 19.8: Average catch per angler per month, by target species and month

	Pike	Coarse fish >1kg/2lbs	All coarse fish - kgs	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	9.5	1.0	12.2	0.1	-	1.5	10.3	9.4	2.0	25.1
Feb	8.8	0.8	6.6	0.3	1.0	9.9	13.6	0.0	0.0	16.5
Mar	11.4	4.7	11.3	1.0	3.1	8.7	11.2	1.3	-	12.9
Apr	8.6	4.3	19.2	0.5	3.1	15.1	10.2	2.2	25.4	17.2
May	14.6	8.1	31.7	0.8	2.9	17.9	8.9	1.6	22.5	18.8
Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										
Avg	10.6	3.8	16.2	0.5	2.5	10.6	10.8	2.9	12.5	18.1

Table 19.9: Average catch per session, by target species and month

	Pike	Coarse fish >1kg/2lbs	All coarse fish - kgs	Salmon	Sea trout	Brown trout	Rainbow trout	Sea bass	Mackerel	Other sea fish
Jan	3.3	0.4	4.9	0.1	-	0.8	4.7	3.7	0.7	13.6
Feb	2.4	0.4	3.2	0.1	0.5	2.8	4.5	0.0	0.0	11.5
Mar	3.2	1.1	2.6	0.2	0.8	2.6	3.5	0.3	-	5.0
Apr	3.1	1.1	5.0	0.1	1.0	3.3	3.9	0.6	15.9	5.9
May	3.8	2.6	10.2	0.1	0.9	2.8	3.5	0.6	10.7	7.6
Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										
Avg	3.2	1.1	5.2	0.1	0.8	2.4	4.0	1.0	6.8	8.7

Fishing Methods

Table 19.10: Fishing methods used (%), by target species and month

(by survey respondents)

Pike	Lures, Dead baits plugs or spinners	Fly fishing	Coarse fish	Float	Ledgering/ Swimfeeder	Pole	Other
Jan	55	70		46	31	31	31
Feb	53	81		44	44	25	19
Mar	72	60		30	35	17	30
Apr	80	44		48	52	12	18
May	91	39		59	44	19	19
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							

Salmon	Fly fishing	Worms/ Maggots	Prawn/ Shrimp	Spinner/ Spoon	Trolling
Jan	80	0	10	40	0
Feb	78	0	0	39	4
Mar	76	3	3	32	6
Apr	85	12	5	33	2
May	85	17	11	42	5
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					

Sea trout	Fly fishing	Worms/ Maggots	Spinner/ Spoon	Trolling
Jan	0	0	0	0
Feb	0	0	100	0
Mar	44	11	44	22
Apr	63	0	50	0
May	58	11	53	11
Jun				
Jul				
Aug				
Sep				
Oct				
Nov				
Dec				

Brown Trout	Fly fishing	Worms/ Maggots	Spinner/ Spoon	Plugs/ Plastic lures	Deadbaits (incl. minnows)
Jan	100	0	0	0	0
Feb	67	0	17	22	11
Mar	72	8	13	14	1
Apr	83	6	10	11	2
May	90	5	8	7	3
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					

Rainbow Trout	Fly fishing	Worms/ Maggots	Spinner/ Spoon	Plugs/ Plastic lures	Deadbaits (incl. minnows)
Jan	92	0	0	0	0
Feb	86	0	7	14	0
Mar	87	0	7	10	0
Apr	92	8	8	8	0
May	82	11	21	7	0
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					

Sea Bass	Fly fishing	Plugs / Hard Lures / Spinners	Natural Bait	Soft lures
Jan	0	71	29	29
Feb	0	50	100	0
Mar	0	33	50	50
Apr	0	50	33	42
May	6	38	63	31
Jun				
Jul				
Aug				
Sep				
Oct				
Nov				
Dec				

Mackerel	Feathers	Spinners	Natural Bait
Jan	100	0	100
Feb	100	0	0
Mar	0	0	0
Apr	100	0	0
May	91	27	9
Jun			
Jul			
Aug			
Sep			
Oct			
Nov			
Dec			

Table 19.10 (continued): Fishing methods used (%), by target species and month
 (by survey respondents)

Other Sea fish	Feathers	Spinners	Natural Baits	Perks / jigs	Other
Jan	15	0	100	0	0
Feb	19	6	94	0	0
Mar	7	7	93	0	14
Apr	19	14	95	24	10
May	42	31	77	42	8
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					

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<http://www.fisheriesireland.ie/media/tdistudyonrecreationalangling.pdf>.

APPENDIX 1

Other publications

Other published papers associated with the research programme on socio-economics of inland fisheries include the following.

- Grilli, G., Curtis, J., Hynes, S. and O'Reilly, P. (2019). 'Anglers' views on stock conservation: Sea bass angling in Ireland', *Marine Policy*, Vol 99, pp. 34–41, <https://doi.org/10.1016/j.marpol.2018.10.016>.
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Curtis, J. and Stanley, B. (2016). 'Water quality and recreational angling demand in Ireland', *Journal of Outdoor Recreation and Tourism*, Vol. 14, pp. 27–34, <https://doi.org/10.1016/j.jort.2016.04.005>.

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