National Strategy for Angling Development

The Economic Contribution of Salmon and Sea Trout Angling in Ireland

2015

1 The Economic Contribution of Salmon and Sea Trout Angling in Ireland

Inland Fisheries Ireland (IFI) is the state agency responsible for the protection, management and conservation of the Republic of Ireland's inland fisheries and recreational sea angling resources. The Republic of Ireland has over 70,000 kilometres of rivers and streams, 144,000 hectares of loughs and over 5,600 kilometres of coastline, all of which fall under the remit of IFI. Many of these fisheries provide an ideal habitat for salmonid species and Ireland has a long tradition of having excellent wild salmon and sea trout fisheries, particularly on the Atlantic sea board from Co. Donegal in the north to Co. Cork in the south.

The salmon is an iconic species on the island and it has both cultural and economic significance. Towards the end of the twentieth century and in the early years of the twenty first century the numbers of Irish salmon harvested by all methods for human consumption approached 270,000 per annum. From 2001 onwards this figure fell year on year to just over 108,000 in 2006; this precipitous decline led to the banning of mixed stock commercial salmon fishing in Irish waters from 2007 onwards. Ireland's 145 main salmon rivers are now managed with conservation of the species being the decisive factor in the management approach for each. The salmon stock in each river is scientifically assessed each year and a decision is made whether to allow recreational angling or, alternatively, to close the fishery for that year; Ireland exploits no salmon stocks which fall below their conservation limits. Some 87 of the 145 main salmon rivers were open for angling in 2014; 30 of which were open on a 'catch and release' basis.

The sea trout is the migratory form of the brown trout and is a popular target fish for anglers in rivers and coastal waters around the country. Current understanding suggests that the incidence of sea trout and the composition and status of their stocks is sensitive to the environments in which they live. Their complex life history features coupled with their widespread occurrence, makes sea trout a unique and potentially sensitive indicator of environmental change. Sea trout were formerly a species of high angling and economic value particularly in the Connemara area of County Galway; however, sea trout stocks in western fisheries collapsed in the late 1980s and early 1990s due to sea-lice infestations associated with intensive salmon farming in these areas. While some Irish fisheries do still contain good numbers of sea trout, a bye law remains in place whereby it is an offence to kill any sea trout in the Galway, Connemara or Ballinakill Fisheries Districts in an attempt to conserve the remaining sea trout stocks. Other fisheries, such as that on lough Currane in Kerry, still boast significant populations of sea trout and remain very important fisheries to Ireland from both an angling and an economic perspective.

Until recently very little had been done to estimate the contribution of the Irish angling resource to the Irish economy. In 2012 Tourism Development International (TDI) on behalf of IFI conducted their 'Socio-Economic Study of Recreational Angling in Ireland' to try and gather information relating to domestic anglers and the level of angling tourism from overseas markets. Anglers were surveyed at given angling locations and asked to provide information detailing their expenditure patterns as well as their motivations and angling preferences corresponding to their 'current angling trip'. The report, which was published in 2013, estimated the total economic contribution of recreational angling in Ireland to be approximately €755 million with an estimated 406,000 individuals having participated in angling over the course of 2012. This figure included 252,000 domestic Irish anglers, 41,000 trips from Northern Irish anglers and 113,000 from overseas markets. The estimated 252,000 Irish anglers represented some 7% of the adult population aged 15 years or more.

More recently, in 2015 IFI commissioned an omnibus survey in conjunction with Millward Brown which suggested that some 7.6% of the population aged 15 years or older considered themselves to be recreational anglers; this gives an increased total of 273,600 domestic anglers based on April 2014 population data (CSO). The margin of error for the omnibus survey is +/- 1.53% with 95% confidence (at 50% reporting incidence) based on 4044 face to face interviews.

In the following sections the key markets for salmon and sea trout angling in Ireland will be examined and anglers' expenditure estimates will be made based on the most current data available. The key markets which will be focused upon are those of Irish domestic anglers, Northern Irish anglers and overseas anglers. Where expenditure ranges are estimated in respect of these markets a mid-point value is assumed for each; this mid-point will be presumed to be close to being accurate.

In estimating the total annual expenditures for Irish domestic anglers, three different data sources will be used: Source A uses annual expenditure figures as reported by domestic anglers surveyed for the 2013 TDI report along with current angler participation estimates based on the 2015 omnibus survey; Source B uses average annual expenditure figures as reported by all angler types in the TDI report along with 2015 omnibus participation estimates and, finally, Source C uses participation figures based on salmon and seatrout angler participation estimates and mean daily expenditure and overnight expenditure figures as reported across all angling types in the 2013 TDI report.

Following this analysis, the total contribution of salmon and sea trout angling to the Irish economy will be estimated taking into account such factors as economic multipliers (i.e. the knock on effect of initial rounds of expenditure) and leakages (i.e. the economic loss associated with imported goods). Comparisons will then be drawn between the economic

contribution of salmon and sea trout angling to the Irish economy and the economic contribution of salmon and sea trout angling in other countries with comparable angling cultures and angling resources to those of Ireland.

2 Domestic Anglers

2.1 Source A: Domestic Salmon and Sea Trout Angler Expenditure

(based on domestic angler participation rates estimated using 2015 omnibus survey figures and annual expenditure figures as indicated by Irish salmon and sea trout anglers in 2012)

Irish anglers have a high tendency to fish for multiple species and, as such, it is difficult to categorise them by species sought. However, the most recent survey work carried out by IFI (Millward Brown, 2015) indicated that when anglers were asked to choose only *one* angling type above all others a total of 23% of Irish domestic anglers indicated that they preferred salmon or sea trout angling above all other angling types; this gives a total of 62,928[1] Irish domestic salmon and sea trout anglers based on current population data[2]. The 2013 TDI report indicated that domestic Irish anglers across all angling types spend an estimated €1,974 annually on their fishing with salmon and sea trout anglers showing average expenditure figures of €2,179 and €1,891 respectively. If it is presumed that annual angler expenditure figures remain the same in 2015 as were reported in 2012, with total expenditure then calculated by angling category, a gross expenditure figure of €128 million for domestic salmon and sea trout anglers can be determined, this is shown in Table 1.

Table 1: Source A – Annual Domestic Salmon and Sea Trout Angler Expenditure		
Number of Recreational Salmon and Sea Trout Anglers in 2015	62,928	
	Salmon	**Sea Trout**
Annual Expenditure on Angling	€2,179	€1,891
Total Domestic Salmon and Sea Trout Angler Expenditure Range	**€137,120,112**	**€118,996,848**
Total Domestic Salmon and Sea Trout Angler Expenditure (Mid-Point Value)	**€128,060,000**	

[1] 3,600,000 Irish population aged 15or older x 7.6% angler participation x 23% salmon and sea trout anglers = 62,928
[2] CSO 2014

2.2 Source B: Domestic Salmon and Sea Trout Angler Expenditure

(based on domestic angler participation rates estimated using 2015 omnibus survey figures and expenditure figures as recorded across all angling types in 2012)

The TDI report indicated that the average per person expenditure for Republic of Ireland anglers for their 'current angling trip' was €178. Taking into account the average number of trips taken during the past 12 months by Republic of Ireland anglers (8.28), average annual expenditure using this source can be estimated at €1,473. This figure does not include fixed or overhead expenses such as boats, engines and capital expenditure on fishing tackle; when the figure is adjusted to include these items, the estimated annual expenditure rises to €1,974. In order to arrive at an estimate of total domestic expenditure on recreational salmon and sea trout angling, a mid-point is assumed in the expenditure ranges indicated (Table 2); for domestic salmon and sea trout anglers this mid-point is €108.5 million.

Table 2: Source B – Annual Domestic Salmon and Sea Trout Angler Expenditure		
Number of Recreational Salmon and Sea Trout Anglers in 2015	62,928	
Annual Expenditure on Angling	€1,473	€1,974
Total Expenditure Range	€92,692,944	€124,219,872
Total Expenditure – Mid-Point Value	**€108,500,000**	

2.3 Source C: Domestic Salmon and Sea Trout Angler Expenditure

(based on domestic angler participation rates estimated during the 2013 TDI report and mean daily expenditure figures as recorded across all angling types in 2012)

Results from the 2013 TDI report indicated that of the estimated 223,000 domestic Irish anglers who went on at least one angling day trip in 2012, some 41% or 91,000 had been on a day trip to participate in salmon or sea trout angling in 2012 (Table 3). Of the Irish anglers who stayed on an overnight angling trip, 60% (32,000) of them had done so at least in part to fish for salmon and/or sea trout.

It should also be noted that, due to the high number of Irish anglers who target multiple species, not all of these trips can be attributed solely to the pursuit of salmon and sea trout as indicated. The TDI report shows an anomaly between the reported figures for

anglers who went on an angling day trip (223,000) and the sum of day trips by species sought (366,000), as seen in Table 3, and this approach can lead to an overestimation of expenditure figures when calculated by individual fish species. In order to mitigate the bias caused as a consequence of this multiple species approach and in the absence of more complete data, calculations will be multiplied by 0.61 to reflect the ratio of actual day trips taken by domestic anglers (223,000) versus day trips as categorised by species targeted (366,000).

Table 3: Species Targeted on Day Fishing Trips – Domestic Anglers

Species	Participation	Estimated Number of Anglers
Salmon Only	9%	20,000
Salmon and Sea Trout Combined	22%	49,000
Sea Trout Only	10%	22,000
Brown Trout	30%	67,000
Pike	28%	62,000
Coarse (Excl Pike)	19%	42,000
Bass	10%	33,000
Sea Angling (Excl Bass)	32%	71,000
Total		**366,000**

Source: Millward Brown Lansdowne/Household Survey. Total percentage figure is overestimated as a result of anglers targeting multiple species on their trips

As shown in Table 4, it is possible to estimate a range using these figures for the volume of domestic salmon and sea trout anglers; however, this range is likely to be more accurate towards its lower bound estimate as it is subject to a level of duplication between anglers making day fishing trips and those taking overnight trips.

Table 4: Domestic Salmon and Sea Trout Anglers – Volume Estimates by Category

	Anglers on Day Fishing Trips	Anglers on Overnight Fishing Trips	Range	
			Minimum	Maximum
Salmon and Sea Trout	91,000	32,000	91,000	123,000

The overall average number of day trips taken by all domestic anglers was 13.61. Average expenditure per trip was €82 for domestic local anglers and €120 for non-local day trip

visitors. By using these figures in conjunction with the participation numbers given above, an estimate of the gross expenditure of day visit Irish salmon and sea trout anglers can be made. Again, a mid-point value of €101 will be used to estimate the expenditure of local and day trip anglers as shown in Table 5.

Table 5: Source C - Expenditure Estimates for Domestic Day Trip Anglers	
Angler Days	952,700[3]
Mean Expenditure (per person per day)	€101
Total Expenditure	€96,222,700
Total Expenditure (allowing for multiple species bias @ 0.61)	**€58,695,850**

Following on from this, an estimate of the maximum expenditure of day trip salmon and sea trout anglers is found to be in the region of €114 million and a minimum expenditure in the region of €78 million with the true figure likely to be somewhere in the middle of these two estimates so approximately €96 million. When this figure is adjusted to allow for multiple species bias the combined expenditure figure for day trip anglers targeting salmon and sea trout is €58.7 million.

According to the TDI report, some 32,000 domestic salmon and sea trout anglers went on overnight angling trips during 2012 (Table 6). The overall average number of trips taken was 5.25 with an average of 2.08 nights per trip resulting in 349,440 domestic fishing nights. On their 'current trip', salmon and sea trout anglers indicated an average per person expenditure of €744 and €692 respectively. These are the highest trip expenditures recorded in the TDI study across all angling types. The indicated 'current trip' expenditure figure gives a gross expenditure figure for domestic overnight salmon and sea trout anglers of €23 million (Table 7).

[3] 70,000 brown trout angling participants x 13.61 average day trips = 952,700 angler days

Table 6: Species Targeted on Domestic Overnight Fishing Trips		
	Participation*	**Estimated Number of Anglers**
Salmon Only	12%	6,000
Salmon and Sea Trout Combined	30%	16,000
Sea Trout Only	18%	10,000
Brown Trout	26%	14,000
Pike	28%	15,000
Coarse (Excl Pike)	31%	17,000
Bass	20%	11,000
Sea Fish (Excl Bass)	42%	22,000
Total		**111,000**

Source: Millward Brown Lansdowne/Household Survey Total Domestic Overnight Trips in 2012. Total percentage figure is overestimated as a result of anglers targeting multiple species on their trips

Again, an allowance must be made to reflect the high incidence of multiple species being targeted by Irish anglers. In order to do this it is presumed that of the 32,000 anglers who reported having overnight trips to target salmon and sea trout not all of their trips were taken specifically to target these species. In the absence of more complete data, the figures given for overnight trips will be multiplied by 0.49[4] to reflect the ratio of actual overnight trips taken (54,000) versus trips as categorised by species targeted (111,000) in the TDI report (Table 6).

Table 7: Domestic Salmon and Sea Trout Anglers on Overnight Trips		
Number of Domestic Overnights Targeting Salmon and Sea Trout	32,000	
Annual Expenditure on Angling	**Salmon**	**Sea Trout**
	€744	€692
Total Expenditure Range	€23,808,000	€22,144,000
Total Expenditure – Mid-Point Value	**€23,000,000**	
Salmon and Sea Trout Angler Overnight Expenditure (allowing for multiple species bias @ 0.49)	**€11,260,000**	

[4] 0.49 = 54,000/111,000

When the Source C expenditure figures for both day trip and overnight salmon and sea trout anglers are combined, the total expenditure figure arrives at €70 million. In order to arrive at an estimate for annual domestic salmon and sea trout expenditure the average expenditure figures across sources A, B and C are calculated; this figure, as can be seen in Table 8, is estimated to be in the region of €102 million.

Table 8: Average Annual Expenditure – Domestic Salmon and Sea Trout Anglers	
Source A	€128,060,000
Source B	€108,500,000
Source C	€70,000,000
Domestic Salmon and Sea Trout Anglers Average Annual Expenditure	**€102,187,000**

3 Northern Ireland Angler Expenditure on Recreational Angling

In 2009, the *Watersports and Leisure Participation* survey estimated that there were 81,000 anglers (both sea and freshwater) in Northern Ireland, an approximate 5.6% of the total adult population (British Marine Federation *et al.,* 2011).

In 2012, an estimated 41,000 trips were made by Northern Irish individuals to participate in recreational angling in the Republic of Ireland; some 58% of these trips had involved salmon and 30% involved sea trout angling (TDI, 2013). The individuals on these trips spent an average of €360 per trip and total expenditure on recreational angling in the Republic of Ireland by Northern Irish anglers in 2012 was estimated to be in the order of €14.6 million. These figures provide an estimate for the expenditure of Northern Irish salmon and sea trout anglers to be in the region of €13 million; however, an allowance must be made for anglers who target multiple species on their trips. The number of trips reported by Northern Irish anglers in the TDI study came to 41,000 yet when angler participation is estimated by angling category the figure increases to 86,000. The discount ratio of 0.48 (representing the actual number of trips versus the trips reported by angling category) is then applied to the estimated expenditure figure to give a total of €6.2 million (Table 9).

Table 9: Northern Ireland Angler Expenditure on Recreational Salmon and Sea Trout Angling	
Number of Salmon and Sea Trout Angling Trips in the Republic of Ireland in 2012.	36,000[5]
Average Expenditure (per person per trip)	€360
Expenditure Range in Republic of Ireland in 2012	€12,960,000
N.I. Salmon and Sea Trout Angler Expenditure (allowing for multiple species bias @ 0.48)	**€6,200,000**

[5] Northern Ireland Salmon & Sea Trout anglers who visited ROI in 2012 (TDI, 2013) – 88% of 41,000

4 Overseas Anglers

In 1999, an estimated 173,000 overseas visitors to Ireland participated in angling (Fáilte Ireland); by 2003 this figure had dropped to approximately 88,000 and since then the numbers of overseas anglers travelling to Ireland each year have never fully recovered.

The TDI report uses overseas tourism figures for Ireland taken from Fáilte Ireland's 2011 *Tourism Facts* publication to help in estimating figures for 2012. Of the presumed 113,000 angling trips made by overseas visitors to Ireland in 2012, an estimated 55% (62,000) were, at least in part, to fish for salmon and sea trout (TDI, 2013). With the benefit of hindsight it can be seen that overseas angler numbers were in fact higher in 2012 than presumed, with 118,000 angling visitors during the year; this figure increased further to 128,000 in 2013. By taking the average *Overseas Anglers* figure as a percentage of *Total Overseas Visitors* based on figures taken from Fáilte Ireland's 2009-2013 Tourism Facts publications (Table 10) and cross referencing with Fáilte Ireland's total tourism figures for 2014, it can then be estimated that over 144,000 overseas anglers visited Ireland in 2014.

Table 10: Fáilte Ireland Overseas Visitor Numbers 2000 – 2014

Year	Number of Overseas Visitors to Ireland	Number of Overseas Anglers	Overseas Anglers as a Percentage of Total Overseas Visitors
2000	6,181,000	-	-
2001	5,840,000	-	-
2002	5,919,000	-	-
2003	6,178,000	88,000	0.0142
2004	6,384,000	93,000	0.0146
2005	6,763,000	84,000	0.0124
2006	7,417,000	106,000	0.0143
2007	7,739,000	128,000	0.0165
2008	7,436,000	142,000	0.0190
2009	6,555,000	132,000	0.0201
2010	6,037,000	127,000	0.0210
2011	6,505,000	113,000	0.0174
2012	6,518,000	118,000	0.0181
2013	6,986,000	128,000	0.0183
2014	7,604,000[6]	144,400[7]/132,000[8]	0.0190[9]/0.0174[10]

Source: Fáilte Ireland Tourism Facts

However, for the purposes of this study the more conservative lower bound estimate of 132,000 overseas tourist anglers will be used, this is based on the lowest figure for anglers *as a percentage of total overseas visitors* (0.0174) which was reported in Fáilte Ireland's tourism figures for 2011. Again it will be presumed that the percentage estimates given for overseas salmon and sea trout anglers remain constant at 55%. On the basis of this, it is

[6] Central Statistics Office, January 2015.
[7] Estimate based on anglers as a percentage of total overseas tourists 2009-2013
[8] Based on lowest previous figure available (anglers as a percentage of total tourist numbers, 2011). Actual figure 132,310.
[9] Average based on 2009-2013 figures
[10] Based on lowest previous figure available (2011)

estimated that 72,600 overseas anglers came to Ireland in 2014 with both salmon and sea trout being considered a target species.

There are two recent estimated average expenditure figures for overseas anglers; firstly, Fáilte Ireland's 2011 *Survey of Travellers* (Source D) estimated that overseas anglers spent an average of €858 during their stay in Ireland in 2011 and, secondly, the 2013 TDI study (Source E) which measured the average expenditure by overseas anglers as €1,027 per person per trip during 2012. This gives an annual expenditure range by overseas salmon and sea trout anglers of between €62.4 and €74.6 million; again a mid-point value will be used, in this instance €68 million.

Table 11: Overseas Salmon and Sea Trout Anglers 2014		
Number of Anglers on Overnight Trips	72,600	
Average Expenditure (per trip) – Sources D & E	€858	€1,027
Total Expenditure Range	€62,290,000	€74,560,000
Salmon and Sea Trout Angler Expenditure Mid-Point Value	**€68,425,000**	
Salmon and Sea Trout Angler Expenditure (allowing for multiple species bias @ 0.67)	**€45,845,000**	

Once again there is a discrepancy between the figure given for numbers of overseas anglers who visited Ireland in 2012 (113,000) and the number as reported by angling category (168,000) and an allowance must be made to mitigate this. In this instance, the figure of €68.4 million is multiplied by 0.67 to reflect the ratio of actual trips versus trips reported by angling category and a final figure of €45.8 million is arrived at.

5 Total Expenditure on Recreational Salmon and Sea Trout Angling – All Anglers

As previously stated, in order to arrive at an estimate of total expenditure on recreational salmon and sea trout angling, a mid-point in the expenditure ranges indicated in respect of domestic, Northern Ireland and overseas anglers will be used. If it is presumed that the averaged figures for domestic anglers from Sources A, B and C are close to being accurate for domestic salmon and sea trout anglers, then a calculation can be made estimating the total direct expenditure of anglers from all markets on Irish salmon and sea trout angling to be in the region of €154.2 million (Table 12).

Table 12: Sum of Expenditures	
Domestic Salmon and Sea Trout Anglers (Average of Sources A, B & C)	€102,187,000
Northern Ireland Salmon and Sea Trout Anglers	€6,200,000
Overseas Salmon and Sea Trout Anglers	€45,845,000
Total Combined Expenditure	**€154,232,000**

Figures are rounded for ease of interpretation

This figure of €154.2 million corresponds with the estimated 23% of domestic anglers who participate in salmon and sea trout angling annually, overall increased overseas visitor numbers in 2014 compared with 2012 and also an estimated increase in overall domestic angler numbers from 252,000 to 273,600 based on the most recent estimates provided through the Millward Brown omnibus survey in 2015.

Table 13: Total Net Expenditure	
Gross Expenditure	
Total Domestic Expenditure (including N.I.)	€108,387,000
Total Overseas Angler Expenditure	€45,845,000
Total Gross Expenditure for all Salmon and Sea Trout Anglers	€154,232,000
Economic Contribution	
Leakages	20%
Expenditure (less leakages)	€123,386,000
Indirect and Induced Multiplier	1.7
Indirect Expenditure	€86,364,000
Salmon and Sea Trout Anglers Net Contribution	**€209,750,000**

Figures are rounded for ease of interpretation

Based on estimates from the Central Statistics Office Input-Output figures for Ireland, TDI estimated the composite multiplier for recreational angling expenditure to be 1.70. This figure in part reflects the high indirect impact multiplier of the hotel and catering industry which comprises a large element of the direct expenditure of the anglers in the 2013 Study of Recreational Angling. The estimated annual expenditure for salmon and sea trout angling in Ireland, following adjustments to allow for leakages and multipliers, is thought to be in the region of €210 million (Table 13) and this figure can be compared with valuation figures for other forms of Irish angling in Table 14.

5.1 Expenditure Patterns

In the TDI report salmon and sea trout anglers indicated a tendency to spend far more on accommodation (€229 and €222 respectively) than all other anglers except for bass anglers (€268). They also reported far lower expenditure figures for bait (€7 and €5 respectively) and competition fees (€4 for each) compared with other types of angling. Salmon and sea trout angling are both reliant upon suitable weather conditions and as a consequence of this (as well as other factors) they are generally not viable species in terms of angling competitions. Expenditure on ghillies was also considerably higher for salmon and sea trout anglers (€49 and €54) compared with other angling types (average €25).

Expenditure patterns were very similar for both salmon and sea trout anglers; however, salmon anglers spent more on permits than sea trout anglers (€139 compared with €91). Sea trout anglers spent slightly more on fishing tackle (5% compared with 4% of overall spend), ghillies (6% compared with 5% of overall spend) and boat hire (3% compared with 2 % of overall spend) in comparison with salmon anglers. Expenditure corresponding

to non-angling related items such as accommodation and travel were very similar with the exception of flights and ferries.

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Table 14: Estimated Contribution of Angling in Ireland by Angling Type – 2014/2015																	
Angling Type	Domestic Participation Estimate				Northern Irish[11] Participation Estimate				Overseas Participation[12] Estimate				Total Participation			€ Millions	
	%	Number of Anglers Total	€ Total	€ per person	%	Number of Anglers Total	€ Total	€ per person	%	Number of Anglers Total	€ Total	€ per person	Number of Anglers	Gross Expenditure Per Angler	Net Expenditure Per Angler	Gross Expenditure	Total (Inc. Multipliers)
Sea	24	65,664	€94,940,000	€1,446	11	4,510	€1,623,600	€360	16	21,120	€20,000,000	€943	91,294	€1,273	€1,731	**€116**	**€158**
Bass	4	10,944	€30,732,000	€2,808	5	2,050	€738,000	€360	17	22,440	€21,000,000	€943	35,434	€1,473	€2,004	**€52**	**€71**
Salmon & Sea Trout	23	62,928	€102,187,000	€1,623	42	17,220	€6,199,200	€360	37	48,840	€45,845,000	€943	128,988	€1,197	€1,628	**€154**	**€210**
Pike	12	32,832	€68,430,000	€2,084	5	2,050	€738,000	€360	5	6,600	€5,800,000	€943	41,482	€1,808	€2,459	**€75**	**€102**
Coarse	7	19,152	€51,300,000	€2,678	12	4,920	€1,771,200	€360	14	18,480	€17,500,000	€943	42,552	€1,659	€2,256	**€71**	**€96**
Brown Trout	22	60,192	€90,770,000	€1,508	25	10,250	€3,690,000	€360	11	14,520	€14,200,000	€943	84,962	€1,281	€1,742	**€109**	**€148**
Stocked Fisheries[13]	2	5,472	€9,521,300	€1,740	-	-	-	-	-	-	-	-	5,472	€1,740	€2,366	**€9.5**	**€13**
Other Angling Type[14]	6	16,416	€28,564,000	€1,740	-	-	-	-	-	-	-	-	16,416	€1,740	€2,366	**€28.5**	**€39**
Totals	**100%**	**273,600**	**€476,000,000**	**€1,740**	**100%**	**41,000**	**€14,700,000**	**€360**	**100%**	**132,000**	**€124,345,000**	**€943**	**446,600**	**€1,378**	**€1,875**	**€615m**	**€836m**

[11] Reported Northern Irish angler figures by angling category have been adjusted using a ratio of 0.48 to allow for the targeting of multiple species
[12] Reported overseas angler figures by angling category have been adjusted using a ratio of 0.67 to allow for the targeting of multiple species
[13] When asked to choose one type of angling in the 2015 omnibus survey some 2% of Irish anglers categorised themselves as preferring' Stocked Fisheries'; expenditure estimates based on average expenditure figures reported across all angling types
[14] When asked to choose one type of angling in the 2015 omnibus survey some 6% of Irish anglers categorised themselves as 'Other Angling Type'; expenditure estimates based on average expenditure figures reported across all angling types

6 Employment

According to Fáilte Ireland, €1 million of tourist spending supports 36 jobs. In arriving at an indicative assessment of employment supported by recreational angling in Ireland, the expenditure estimates presented in Table 14 in respect of overseas anglers (€124 million) and Northern Ireland anglers (€14.7 million) can legitimately be classified as tourist spending.

Not all of the estimated €476 million in domestic recreational angling expenditure can be classified as 'tourist' spending however. To arrive at an estimate of domestic tourist angling expenditure, the volume of overnight trips needs to be taken into account and in the TDI report this is estimated to be 37% of total domestic angling expenditure. Taking into account overseas and Northern Ireland expenditure, total tourist angling expenditure can be estimated at approximately €315 million.

Table 15: Total Tourist Angling Expenditure	
	Total Expenditure
Domestic Angler Expenditure Northern Ireland Expenditure Overseas Angler Expenditure	€176,300,000 €14,700,000 €124,345,000
Total Tourist Expenditure	**€315,500,000**

Source: TDI / Fáilte Ireland / Household survey

Therefore, applying the Fáilte Ireland formula of 36 jobs supported for every €1 million in tourist expenditure, recreational angling can be estimated to support approximately 11,350 jobs (based on 36 jobs per million in tourist expenditure). Approximately 3,235 of these jobs are supported by salmon and sea trout angling as shown in Table 16.

Table 16: Number of Jobs Supported by Angling Tourism Expenditures (categorised by angling type)

	Domestic Anglers			Northern Ireland Anglers		Overseas Anglers		Expenditure / Jobs	
Angling Type	Number of Anglers Total	€ Total Domestic Expenditure	€ Domestic Tourism Expenditure	Number of N.I. Anglers Total	€ Total N.I. Expenditure	Number of Overseas Anglers Total	€ Total Overseas Expenditure	Total Tourism Expenditure	Number of Jobs Supported
Sea	65,664	€ 94,940,000	€ 35,127,800	4,510	€ 1,623,600	21,120	€ 20,000,000	€ 56,751,400	2,043
Bass	10,944	€ 30,732,000	€ 11,370,840	2,050	€ 738,000	22,440	€ 21,000,000	€ 33,108,840	1,192
Salmon & Sea Trout	62,928	€ 102,187,000	€ 37,809,190	17,220	€ 6,199,200	48,840	€ 45,845,000	€ 89,853,390	3,235
Pike	32,832	€ 68,430,000	€ 25,319,100	2,050	€ 738,000	6,600	€ 5,800,000	€ 31,857,100	1,147
Coarse	19,152	€ 51,300,000	€ 18,981,000	4,920	€ 1,771,200	18,480	€ 17,500,000	€ 38,252,200	1,377
Brown Trout	60,192	€ 90,770,000	€ 33,584,900	10,250	€ 3,690,000	14,520	€ 14,200,000	€ 51,474,900	1,853
Stocked Fisheries	5,472	€ 9,521,300	€ 3,522,880	-	€ -	-	€ -	€ 3,522,880	127
Other Angling Type	16,416	€ 28,564,000	€ 10,568,680	-	€ -	-	€ -	€ 10,568,680	380
Totals	273,600	€ 476,000,000	€ 176,284,391	41,000	€ 14,700,000	132,000	€ 124,345,000	**€ 315,329,391**	**11,354**

7 Similar Markets

There are two European countries whose salmon fisheries are comparable with those of Ireland albeit on a larger scale in both cases; these are Scotland and Norway.

For Scotland, in 2004 an estimated 60,000 individuals participated in recreational angling and spent up to £113 million; this resulted in the Scottish economy producing over £100 million worth of annual output which supported around 2,800 jobs and generated nearly £50 million in wages and self-employment income to Scottish households. Of that £113 million, the survey concluded that more than 65 per cent i.e. nearly £74 million was derived from salmon and sea trout angling.

In Norway, recreational salmon angling in rivers yield great social and economic benefit to rural and peripheral regions because of the vast number of anglers involved and because of the substantial direct and indirect expenses associated with their expenditures. Recreational angling for salmon in Norway is reported to have an economic value estimated to NOK 1.3 billion (€155- €160 million per annum). It is also reported that around 80,000[15] adult Norwegians enjoy recreational angling annually and this figure has remained stable in recent years[16]. Additionally, since the British upper-class discovered Norway's excellent salmon fisheries in the middle of 1800s, thousands of foreign tourists have also been attracted to Norway for its salmon angling. It is estimated that about 35,000 foreign anglers fished for salmon in Norway in 2003[17]. Norway has, however, seen a decline in salmon stocks similar to that experienced in Ireland in recent years. This decline in fish abundance is caused by a combination of factors associated with human activities including overexploitation, habitat destruction, and salmon aquaculture as well as changes in the natural environment.

Unfortunately there is far less data available on the economic benefits of sea trout fisheries compared with those of salmon fisheries and in light of this there will be no comparisons drawn between Irish sea trout fisheries and those available in similar markets to Ireland.

[15,15] Norges Skogeierforbund. Utvikling av utmarksbaserte reiselivsbedrifter 2004
[16] (1997–2008, Statistics Norway

8 Conclusions

In summary, recreational angling in Ireland can provide significant economic benefits to rural and peripheral regions whose natural angling resources can attract both domestic and overseas angling participants. In many cases these rural areas may be devoid of any alternative tourist attractions and angling can provide an important and sustainable source of income for both the catering and accommodation service providers in these marginalised communities. Recreational angling also has the ability to attract anglers at times outside of the main tourist seasons; the shoulder periods of March through May and again from mid-August through to October provide some of the best angling in Ireland and, as a consequence of this, they are the most popular angling months. These shoulder periods can help to extend the traditional tourist season for both accommodation and service providers with the potential to also provide increased employment and entrepreneurial opportunities within these communities.